

=> FILE REG

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STRUCTURE FILE UPDATES: 15 SEP 2003 HIGHEST RN 586329-53-5
DICTIONARY FILE UPDATES: 15 SEP 2003 HIGHEST RN 586329-53-5

TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2003

Please note that search-term pricing does apply when
conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP
PROPERTIES for more information. See STNote 27, Searching Properties
in the CAS Registry File, for complete details:
<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

=> FILE HCAPLUS

FILE 'HCAPLUS' ENTERED AT 15:18:12 ON 16 SEP 2003
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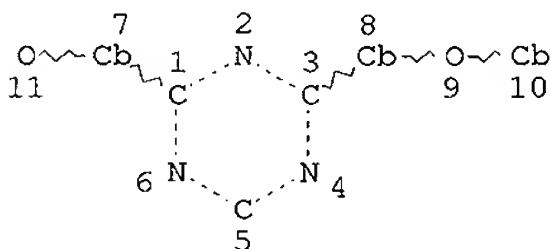
FILE COVERS 1907 - 16 Sep 2003 VOL 139 ISS 12
FILE LAST UPDATED: 15 Sep 2003 (20030915/ED)

This file contains CAS Registry Numbers for easy and accurate
substance identification.

=> D QUE

L6

STR



NODE ATTRIBUTES:
 DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
 RING(S) ARE ISOLATED OR EMBEDDED
 NUMBER OF NODES IS 11

STEREO ATTRIBUTES: NONE

L8 59 SEA FILE=REGISTRY SSS FUL L6
 L9 21 SEA FILE=HCAPLUS ABB=ON L8
 L10 10 SEA FILE=HCAPLUS ABB=ON L9 AND STABILI?
 L11 2 SEA FILE=HCAPLUS ABB=ON L9 AND LIGHT?(4A)ABSORB?
 L12 15 SEA FILE=HCAPLUS ABB=ON L9(L)(PREP OR IMF OR SPN)/RL
 L13 16 SEA FILE=HCAPLUS ABB=ON (L10 OR L11 OR L12)

=> D L13 ALL 1-16 HITSTR

L13 ANSWER 1 OF 16 HCAPLUS COPYRIGHT 2003 ACS on STN
 AN 2003:373833 HCAPLUS
 DN 138:369734
 TI Phenyl ether-substituted hydroxyphenyl triazine ultraviolet **light absorbers**
 IN Gupta, Ram Baboo; Singh, Hargurpreet; Carpadona, Russell
 PA Cytec Technology Corp., USA
 SO Eur. Pat. Appl., 46 pp. *applicants*
 CODEN: EPXXDW

DT Patent
 LA English
 IC ICM C07D251-22
 ICS C08K005-3492; G03C001-73; A61K007-42
 CC 37-6 (Plastics Manufacture and Processing)
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1310492	A1	20030514	EP 2002-257354	20021023
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
	US 2003146412	A1	20030807	US 2001-39933	20011109
PRAI	US 2001-39933	A	20011109		

OS MARPAT 138:369734
 AB This invention relates generally to Ph ether-substituted triazines compds. and compns. contg. same and their use to protect against degrdn. by environmental forces. A method for **stabilizing** a material by incorporating such triazines is also disclosed. 2-(2-Hydroxy-4-octyloxyphenyl)-4,6-bis(4-phenoxyphenyl)-1,3,5-triazine was prepd. and used as a **stabilizer** in polycarbonates.
 ST phenyl ether hydroxyphenyl triazine UV **light absorber**; antiyellowing UV **stabilizer**
 IT Cosmetics
 Dyes
 Inks
 Paper
 Photographic paper
 UV **stabilizers**
 (Ph ether-substituted hydroxyphenyl triazine UV **light**

absorbers)

IT Alkyd resins
 Aminoplasts
 Epoxy resins, properties
 Natural rubber, properties
 Phenolic resins, properties
 Polyamides, properties
 Polycarbonates, properties
 Polyesters, properties
 Polyethers, properties
 Polyimides, properties
 Polyketones
 Polyolefins
 Polyoxymethylenes, properties
 Polyoxyphenylenes
 Polysulfones, properties
 Polythiophenylenes
 Polyurethanes, properties
 Synthetic rubber, properties
 RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
 (Ph ether-substituted hydroxyphenyl triazine UV **light absorbers)**

IT Fibers
 RL: PRP (Properties)
 (Ph ether-substituted hydroxyphenyl triazine UV **light absorbers)**

IT Yellowing prevention
 (agents; Ph ether-substituted hydroxyphenyl triazine UV **light absorbers)**

IT Polyimides, properties
 RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
 (polyamide-; Ph ether-substituted hydroxyphenyl triazine UV **light absorbers)**

IT Polyimides, properties
 Polysulfones, properties
 RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
 (polyether-; Ph ether-substituted hydroxyphenyl triazine UV **light absorbers)**

IT Polyamides, properties
 Polyethers, properties
 RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
 (polyimide-; Ph ether-substituted hydroxyphenyl triazine UV **light absorbers)**

IT Polyethers, properties
 RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
 (polysulfone-; Ph ether-substituted hydroxyphenyl triazine UV **light absorbers)**

IT Discoloration prevention agents
 (yellowing; Ph ether-substituted hydroxyphenyl triazine UV **light absorbers)**

IT 524705-36-0P 524705-37-1P 524705-38-2P
 524705-39-3P 524705-40-6P 524705-41-7P
 524705-42-8P 524705-43-9P 524705-44-0P
 524705-45-1P 524705-47-3P 524705-48-4P
 RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)
 (Ph ether-substituted hydroxyphenyl triazine UV **light absorbers)**

IT 503616-90-8P 524705-35-9P 524705-46-2P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP
(Preparation); RACT (Reactant or reagent)
(Ph ether-substituted hydroxyphenyl triazine UV light
absorbers)

IT 9002-86-2, Polyvinylchloride 9003-08-1, Formaldehyde-melamine copolymer
9003-35-4, Formaldehyde-phenol copolymer 9003-54-7, Acrylonitrile-
styrene copolymer 9003-56-9, ABS copolymer 9004-36-8, Cellulose
acetate butyrate 9011-05-6, Formaldehyde-urea copolymer 24936-68-3,
Lexan101-111, properties
RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
(Ph ether-substituted hydroxyphenyl triazine UV light
absorbers)

IT 95-65-8, 3,4-Dimethylphenol 98-09-9, Benzenesulfonyl chloride 98-88-4,
Benzoyl chloride 101-84-8, Phenyl ether 105-39-5, Ethylchloroacetate
108-39-4, m-Cresol, reactions 108-46-3, Resorcinol, reactions
108-77-0, Cyanuric chloride 136-77-6, 4-Hexylresorcinol 542-69-8,
n-Butyl iodide 629-27-6, n-Octyl iodide 23500-79-0 24772-63-2,
1,8-Diiodooctane
RL: RCT (Reactant); RACT (Reactant or reagent)
(Ph ether-substituted hydroxyphenyl triazine UV light
absorbers)

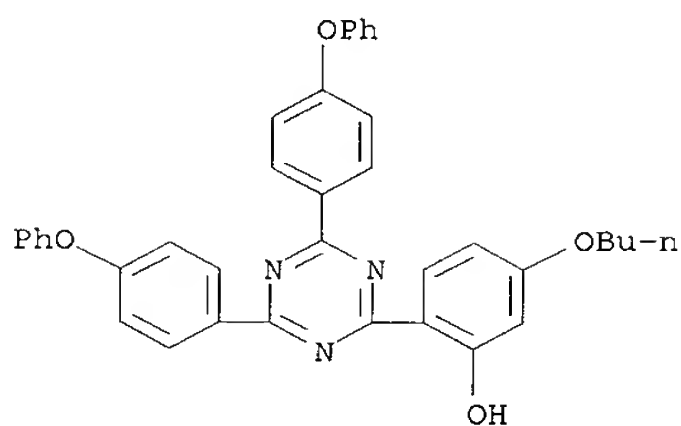
IT 25037-45-0, Bisphenol A-carbonic acid copolymer
RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
(assumed monomers; Ph ether-substituted hydroxyphenyl triazine UV
light absorbers)

IT 9003-53-6
RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
(impact-resistant; Ph ether-substituted hydroxyphenyl triazine UV
light absorbers)

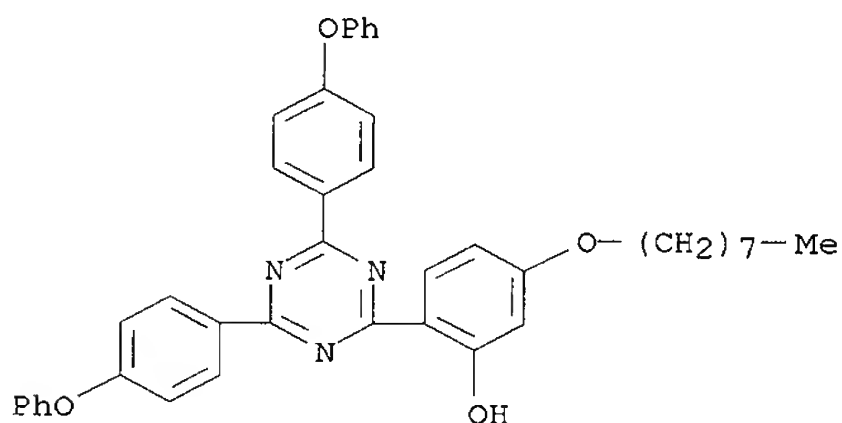
RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Bulliard, C; US 6184375 B1 2001 HCAPLUS
(2) Chang, Y; KOREA POLYMER JOURNAL 2000, V8(3), P142 HCAPLUS
(3) Cytec Tech Corp; WO 9967227 A 1999 HCAPLUS
(4) Cytec Tech Corp; WO 0014074 A 2000 HCAPLUS
(5) DI Pietro, H; US 3211698 A 1965 HCAPLUS
(6) Ici Ltd; GB 1028923 A 1966 HCAPLUS
(7) Mitsui Chemicals Inc; JP 2002160452 A 2002 HCAPLUS

IT 524705-36-0P 524705-37-1P 524705-38-2P
524705-39-3P 524705-40-6P 524705-41-7P
524705-42-8P 524705-43-9P 524705-44-0P
524705-45-1P 524705-47-3P 524705-48-4P
RL: IMF (Industrial manufacture); MOA (Modifier or additive
use); PREP (Preparation); USES (Uses)
(Ph ether-substituted hydroxyphenyl triazine UV light
absorbers)

RN 524705-36-0 HCAPLUS
CN Phenol, 2-[4,6-bis(4-phenoxyphenyl)-1,3,5-triazin-2-yl]-5-butoxy- (9CI)
(CA INDEX NAME)

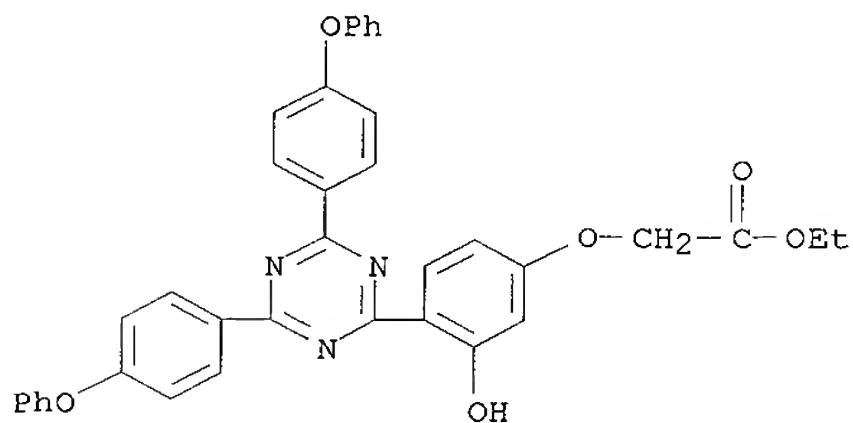


RN 524705-37-1 HCAPLUS

CN Phenol, 2-[4,6-bis(4-phenoxyphenyl)-1,3,5-triazin-2-yl]-5-(octyloxy)-
(9CI) (CA INDEX NAME)

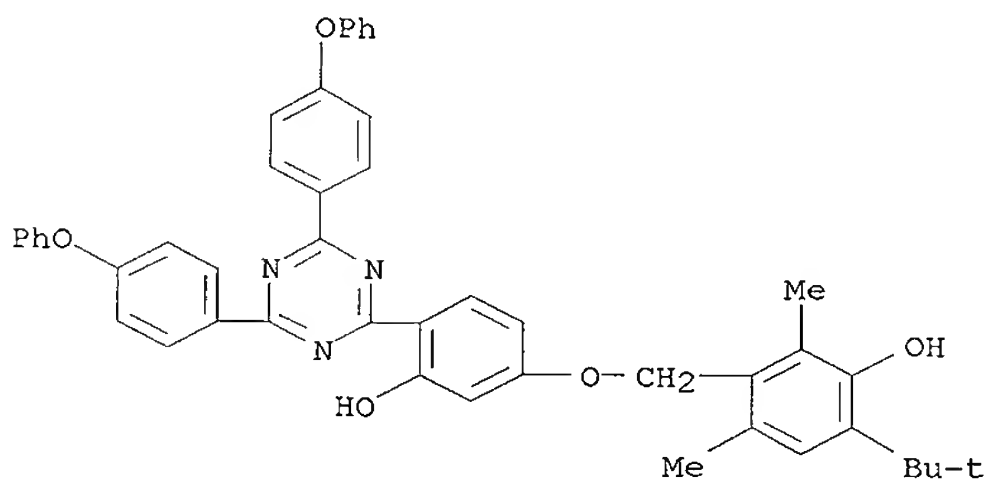
RN 524705-38-2 HCAPLUS

CN Acetic acid, [4-[4,6-bis(4-phenoxyphenyl)-1,3,5-triazin-2-yl]-3-hydroxyphenoxy]-, ethyl ester (9CI) (CA INDEX NAME)

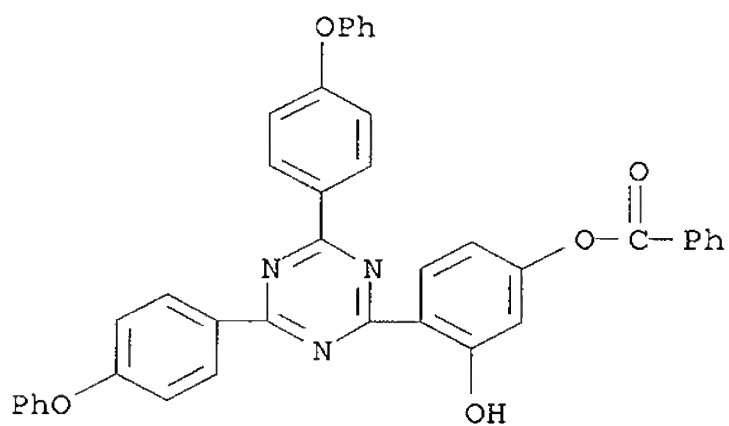


RN 524705-39-3 HCAPLUS

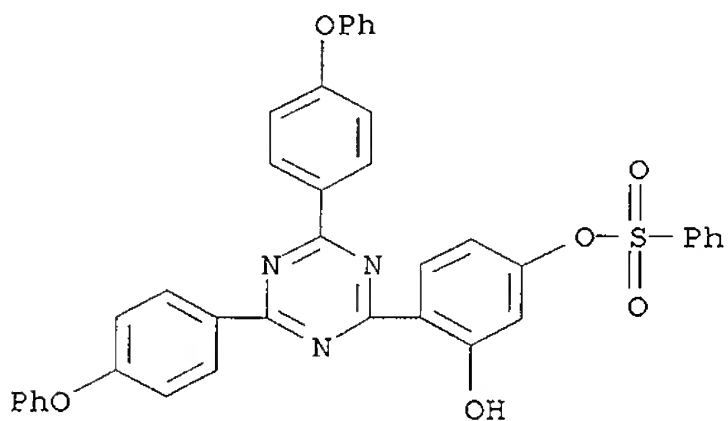
CN Phenol, 3-[[4-[4,6-bis(4-phenoxyphenyl)-1,3,5-triazin-2-yl]-3-hydroxyphenoxy]methyl]-6-(1,1-dimethylethyl)-2,4-dimethyl- (9CI) (CA INDEX NAME)



RN 524705-40-6 HCAPLUS

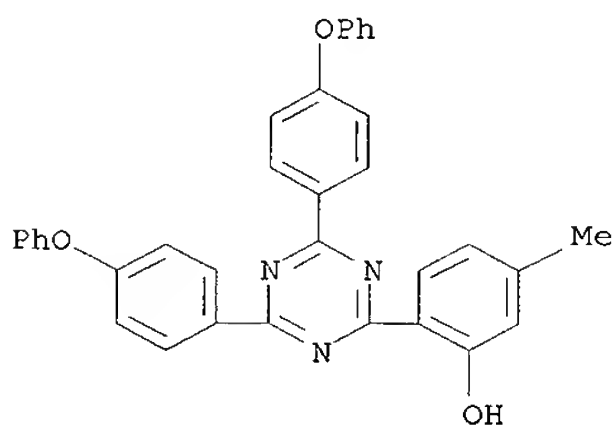
CN 1,3-Benzenediol, 4-[4,6-bis(4-phenoxyphenyl)-1,3,5-triazin-2-yl]-,
1-benzoate (ester) (9CI) (CA INDEX NAME)

RN 524705-41-7 HCAPLUS

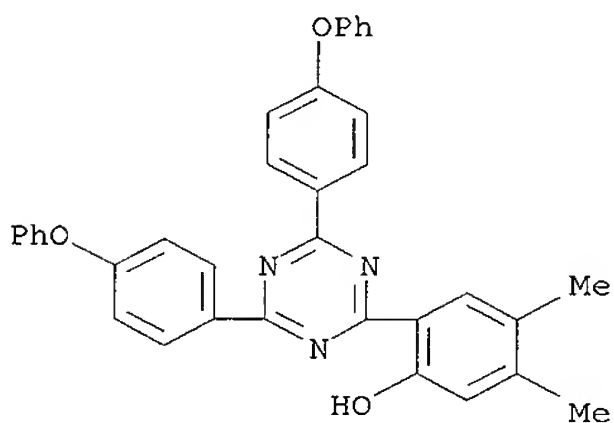
CN 1,3-Benzenediol, 4-[4,6-bis(4-phenoxyphenyl)-1,3,5-triazin-2-yl]-,
1-benzenesulfonate (ester) (9CI) (CA INDEX NAME)

RN 524705-42-8 HCAPLUS

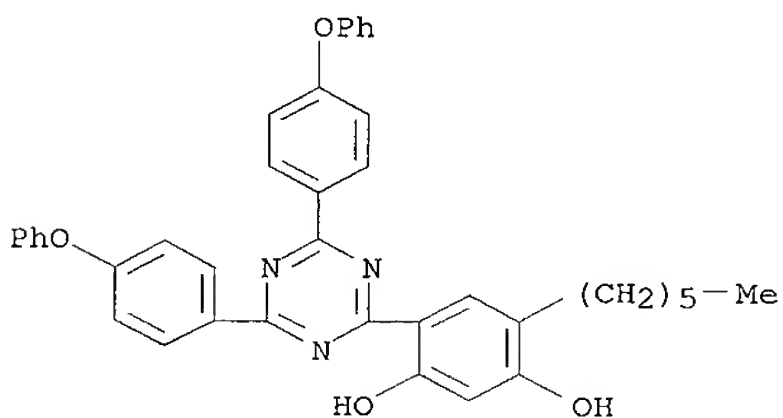
CN Phenol, 2-[4,6-bis(4-phenoxyphenyl)-1,3,5-triazin-2-yl]-5-methyl- (9CI)
(CA INDEX NAME)



RN 524705-43-9 HCAPLUS

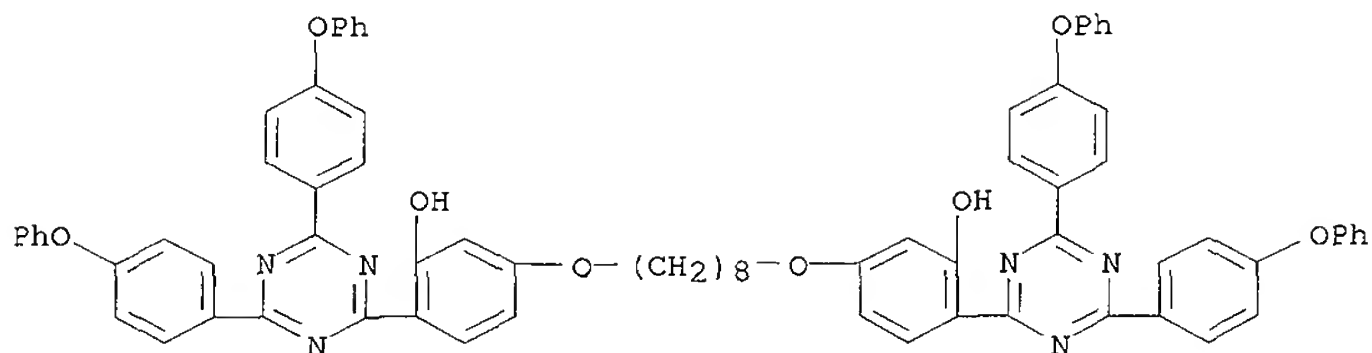
CN Phenol, 2-[4,6-bis(4-phenoxyphenyl)-1,3,5-triazin-2-yl]-4,5-dimethyl-
(9CI) (CA INDEX NAME)

RN 524705-44-0 HCAPLUS

CN 1,3-Benzenediol, 4-[4,6-bis(4-phenoxyphenyl)-1,3,5-triazin-2-yl]-6-hexyl-
(9CI) (CA INDEX NAME)

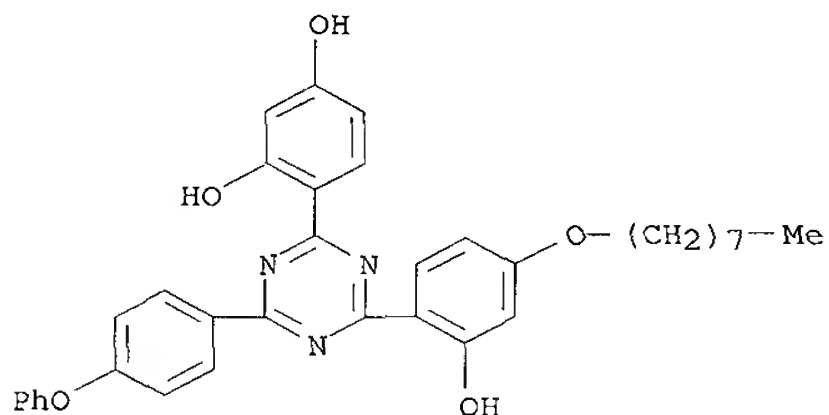
RN 524705-45-1 HCAPLUS

CN Phenol, 3,3'-[1,8-octanediylbis(oxy)]bis[6-[4,6-bis(4-phenoxyphenyl)-1,3,5-
triazin-2-yl]- (9CI) (CA INDEX NAME)



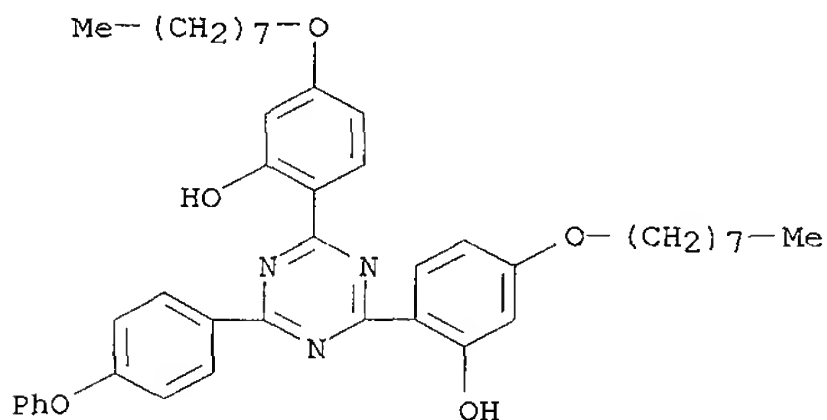
RN 524705-47-3 HCAPLUS

CN 1,3-Benzenediol, 4-[4-[2-hydroxy-4-(octyloxy)phenyl]-6-(4-phenoxyphenyl)-1,3,5-triazin-2-yl]- (9CI) (CA INDEX NAME)



RN 524705-48-4 HCAPLUS

CN Phenol, 2,2'-[6-(4-phenoxyphenyl)-1,3,5-triazine-2,4-diyl]bis[5-(octyloxy)- (9CI) (CA INDEX NAME)



IT 503616-90-8P 524705-35-9P 524705-46-2P

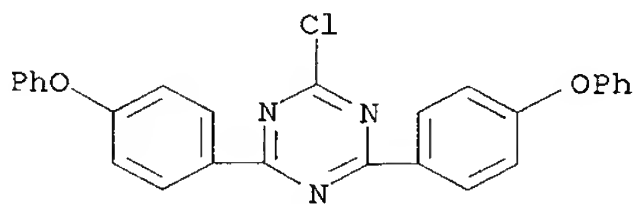
RL: IMF (Industrial manufacture); RCT (Reactant); PREP

(Preparation); RACT (Reactant or reagent)

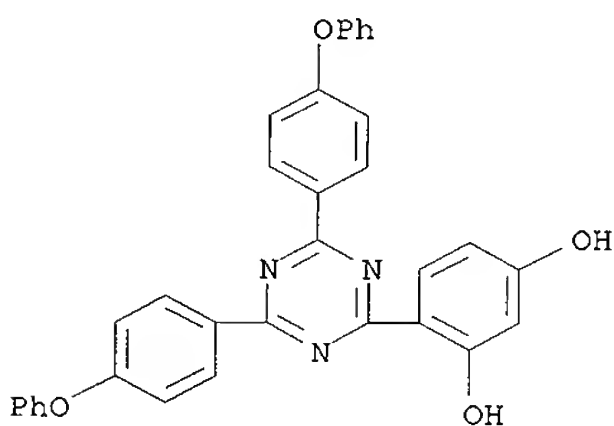
(Ph ether-substituted hydroxyphenyl triazine UV light absorbers)

RN 503616-90-8 HCAPLUS

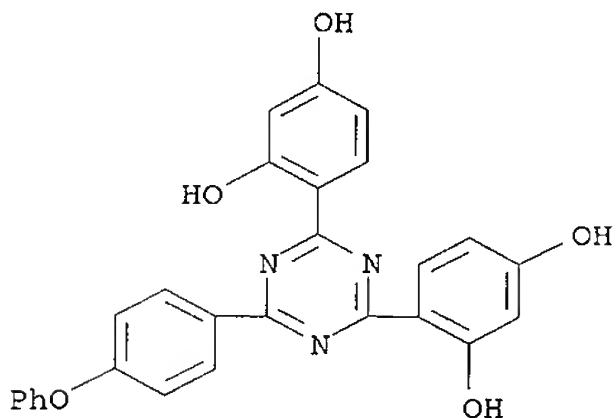
CN 1,3,5-Triazine, 2-chloro-4,6-bis(4-phenoxyphenyl)- (9CI) (CA INDEX NAME)



RN 524705-35-9 HCAPLUS
CN 1,3-Benzenediol, 4-[4,6-bis(4-phenoxyphenyl)-1,3,5-triazin-2-yl]- (9CI)
(CA INDEX NAME)



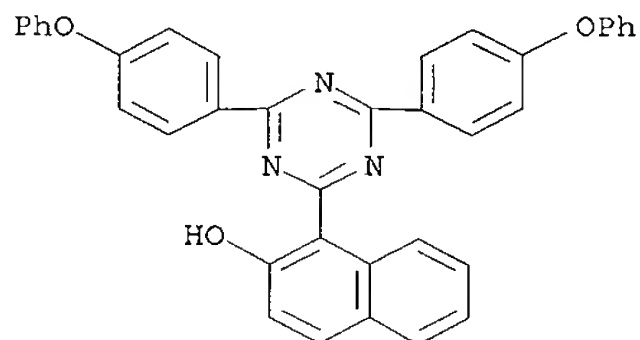
RN 524705-46-2 HCAPLUS
CN 1,3-Benzenediol, 4,4'-[6-(4-phenoxyphenyl)-1,3,5-triazine-2,4-diyl]bis-
(9CI) (CA INDEX NAME)



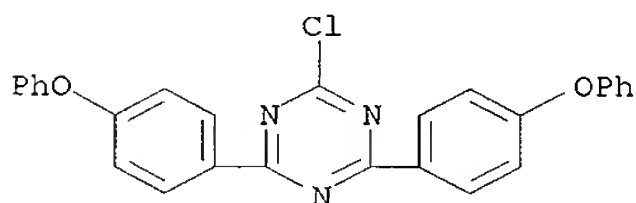
L13 ANSWER 2 OF 16 HCAPLUS COPYRIGHT 2003 ACS on STN
AN 2003:259735 HCAPLUS
DN 138:272371
TI Novel red-shifted triazine ultraviolet light absorbers
for plastics
IN Gupta, Ram Baboo; Singh, Hargurpreet; Cappadona, Russell
PA Cytec Technology Corp., USA
SO Eur. Pat. Appl., 33 pp.
CODEN: EPXXDW
DT Patent

LA English
 IC ICM C07D251-24
 ICS A61K007-42
 CC 37-2 (Plastics Manufacture and Processing)
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1298126	A1	20030402	EP 2002-256654	20020925
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
	US 2003088098	A1	20030508	US 2001-964919	20010927
PRAI	US 2001-964919	A	20010927		
OS	MARPAT 138:272371				
AB	The light absorbers are triazine compds. which bear an (optionally substituted) 1-naphthyl group having at least a OH group on the position ortho to the linking point and other groups including an aryl group. An example of the absorbers is 2,4-bis(4-phenoxyphenyl)-6-(2-hydroxynaphthyl)-1,3,5-triazine which can be prep'd. by the condensation of 2,4-bis(4-phenoxyphenyl)-6-chloro-1,3,5-triazine with 2-naphthol.				
ST	hydroxynaphthyl substituted triazine comp'd UV light absorber manuf				
IT	UV stabilizers (manuf. of red-shifted triazine UV light absorbers for plastics)				
IT	Plastics, miscellaneous RL: MSC (Miscellaneous) (manuf. of red-shifted triazine UV light absorbers for plastics)				
IT	503616-91-9P	503616-92-0P	503616-93-1P	503616-94-2P	
	503616-95-3P	503616-96-4P	503616-97-5P	503616-98-6P	503616-99-7P
	503617-00-3P	503617-01-4P	503617-02-5P		
	RL: IMF (Industrial manufacture) ; MOA (Modifier or additive use); PREP (Preparation) ; USES (Uses) (manuf. of red-shifted triazine UV light absorbers for plastics)				
IT	93-04-9, 2-Methoxynaphthalene 95-47-6, o-Xylene, reactions 108-77-0, Cyanuric chloride 111-50-2, Adipoyl chloride 132-86-5, 1,3-Dihydroxynaphthalene 135-19-3, 2-Naphthol, reactions 582-17-2, 2,7-Dihydroxynaphthalene 629-27-6, 1-Iodooctane 1237-53-2 3842-55-5 24772-63-2, 1,8-Diiodooctane 503616-90-8 RL: RCT (Reactant); RACT (Reactant or reagent) (manuf. of red-shifted triazine UV light absorbers for plastics)				
RE.CNT	4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD				
RE	(1) Cytec Tech Corp; WO 9967224 A 1999 HCAPLUS (2) Cytec Tech Corp; WO 9967226 A 1999 HCAPLUS (3) Cytec Tech Corp; WO 0014077 A 2000 HCAPLUS (4) Hu, N; US 6057048 A 2000 HCAPLUS				
IT	503616-91-9P RL: IMF (Industrial manufacture) ; MOA (Modifier or additive use); PREP (Preparation) ; USES (Uses) (manuf. of red-shifted triazine UV light absorbers for plastics)				
RN	503616-91-9 HCAPLUS				
CN	2-Naphthalenol, 1-[4,6-bis(4-phenoxyphenyl)-1,3,5-triazin-2-yl]- (9CI) (CA INDEX NAME)				



IT 503616-90-8
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (manuf. of red-shifted triazine UV light absorbers
 for plastics)
 RN 503616-90-8 HCAPLUS
 CN 1,3,5-Triazine, 2-chloro-4,6-bis(4-phenoxyphenyl)- (9CI) (CA INDEX NAME)



L13 ANSWER 3 OF 16 HCAPLUS COPYRIGHT 2003 ACS on STN
 AN 2001:137644 HCAPLUS
 DN 134:326846
 TI Hyperbranched poly(ether ketone) analogues with heterocyclic triazine moiety: synthesis and peripheral functionalization
 AU Cho, Song Yun; Chang, Youngkyu; Kim, Jin Seok; Lee, Sang Cheon; Kim, Chulhee
 CS Department of Polymer Science and Engineering, Hyperstructured Organic Materials Research Center, Inha University, Incheon, 402-751, S. Korea
 SO Macromolecular Chemistry and Physics (2001), 202(2), 263-269
 CODEN: MCHPES; ISSN: 1022-1352
 PB Wiley-VCH Verlag GmbH
 DT Journal
 LA English
 CC 35-5 (Chemistry of Synthetic High Polymers)
 AB Hyperbranched poly(ether ketone) with 1,3,5-s-triazine moiety was prepd. by a one-pot polymn. of an AB2 type monomer, 2,4-bis(4-hydroxyphenyl)-6-(4-(4-(4-fluorobenzoyl)phenoxy)phenyl)-1,3,5-s-triazine, which was synthesized from cyanuric chloride. The selective reactivity of three chlorine atoms on cyanuric chloride toward nucleophiles provides a very efficient route for the systematic synthesis of AB2 type triazine monomers and their hyperbranched polymers. The resulting polymers exhibited a glass transition at 264.degree. without any indication of crystallinity. The modification of the peripheral hydroxyl groups on the hyperbranched polymers by methoxy, oligo oxyethylene, or stearyl moieties brought about remarkable changes in their soly. and glass transition temps. The amphiphilic nature of the 2-[2-(2-(2-methoxyethoxy)ethoxy)ethoxy]ethoxy-terminated poly(ether ketone) analog in an aq. phase was investigated by

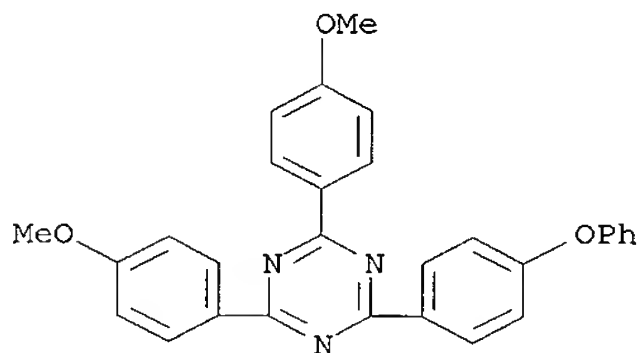
using fluorescence techniques and dynamic light scattering. It was found that the analog forms a self-aggregation at a crit. aggregation concn. of 12.6 mg/L. The mean diam. of the aggregates was 320 nm. The steady-state fluorescence anisotropy value (r) of 1,6-diphenyl-1,3,5-hexatriene (DPH) in the hydrophobic domain was 0.240.

- ST hyperbranched polyether polyketone deriv contg triazine prepn;
fluorescence aggregation glass transition dendrimer polyether polyketone
- IT Polyketones
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(polyether-; prepn. and characterization of hyperbranched poly(ether ketone) analogs with heterocyclic triazine moiety)
- IT Polyethers, preparation
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(polyketone-; prepn. and characterization of hyperbranched poly(ether ketone) analogs with heterocyclic triazine moiety)
- IT Fluorescence
Glass transition temperature
Molecular association
(prepn. and characterization of hyperbranched poly(ether ketone) analogs with heterocyclic triazine moiety)
- IT Dendritic polymers
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and characterization of hyperbranched poly(ether ketone) analogs with heterocyclic triazine moiety)
- IT 108-77-0, Cyanuric chloride 111-77-3, Diethylene glycol monomethyl ether 403-43-0, 4-Fluorobenzoyl chloride 9004-74-4, Polyethylene glycol monomethyl ether 13139-86-1, 4-Methoxyphenyl magnesium bromide 21473-02-9, 4-Phenoxyphenylmagnesium bromide
RL: RCT (Reactant); RACT (Reactant or reagent)
(in prepn. of hyperbranched poly(ether ketone) analogs with heterocyclic triazine moiety)
- IT 318481-72-0P, 2,4-Dichloro-6-(4-phenoxyphenyl)-1,3,5-s-triazine 319491-73-1P, 2,4-Bis(4-methoxyphenyl)-6-(4-phenoxyphenyl)-1,3,5-s-triazine 336611-79-1P 336611-80-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(in prepn. of hyperbranched poly(ether ketone) analogs with heterocyclic triazine moiety)
- IT 336627-21-5P 336627-22-6P 336627-23-7P 336627-24-8P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and peripheral functionalization of hyperbranched poly(ether ketone) analogs with heterocyclic triazine moiety)
- IT 336611-81-5P
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. of hyperbranched poly(ether ketone) analogs with heterocyclic triazine moiety)

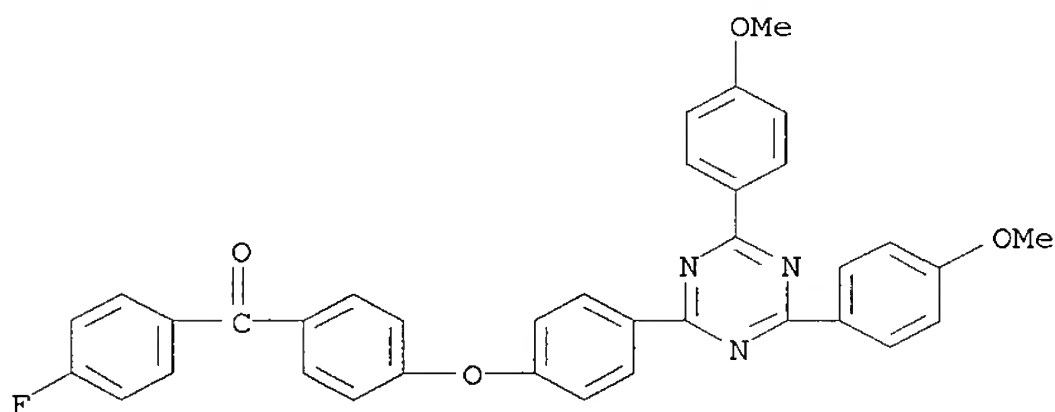
RE.CNT 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE

- (1) Armarego, W; Purification of Laboratory Chemical, 4th edition 1996
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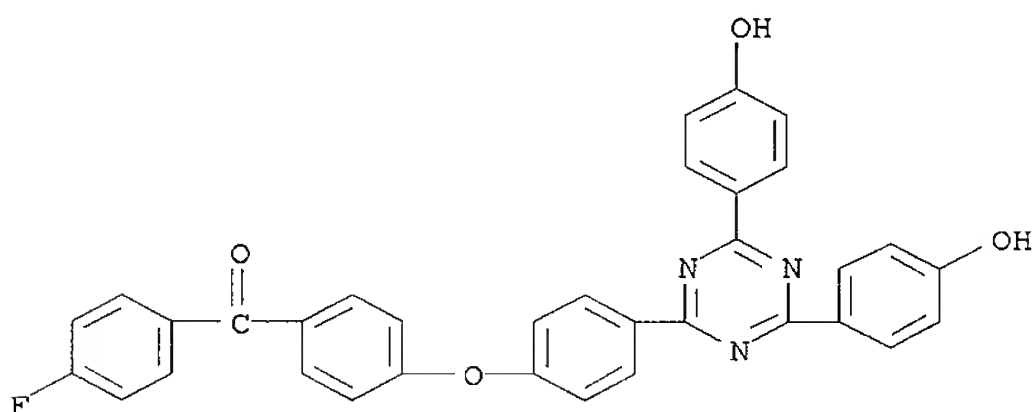
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- IT 319491-73-1P, 2,4-Bis(4-methoxyphenyl)-6-(4-phenoxyphenyl)-1,3,5-s-triazine 336611-79-1P 336611-80-4P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (in prepn. of hyperbranched poly(ether ketone) analogs with heterocyclic triazine moiety)
- RN 319491-73-1 HCAPLUS
- CN 1,3,5-Triazine, 2,4-bis(4-methoxyphenyl)-6-(4-phenoxyphenyl)- (9CI) (CA INDEX NAME)



RN 336611-79-1 HCAPLUS
 CN Methanone, [4-[4-[4,6-bis(4-methoxyphenyl)-1,3,5-triazin-2-yl]phenoxy]phenyl](4-fluorophenyl)- (9CI) (CA INDEX NAME)



RN 336611-80-4 HCAPLUS
 CN Methanone, [4-[4-[4,6-bis(4-hydroxyphenyl)-1,3,5-triazin-2-yl]phenoxy]phenyl](4-fluorophenyl)- (9CI) (CA INDEX NAME)



IT 336627-21-5P 336627-22-6P 336627-23-7P
 336627-24-8P
 RL: PRP (Properties); SPN (Synthetic preparation); PREP
 (Preparation)
 (prepn. and peripheral functionalization of hyperbranched poly(ether ketone) analogs with heterocyclic triazine moiety)
 RN 336627-21-5 HCAPLUS
 CN Methanone, [4-[4-[4,6-bis(4-hydroxyphenyl)-1,3,5-triazin-2-yl]phenoxy]phenyl](4-fluorophenyl)-, homopolymer, methyl ether (9CI) (CA INDEX NAME)
 CM 1
 CRN 67-56-1
 CMF C H4 O

H₃C—OH

KATHLEEN FULLER EIC 1700/PARKER LAW 308-4290

CM 2

CRN 336611-81-5

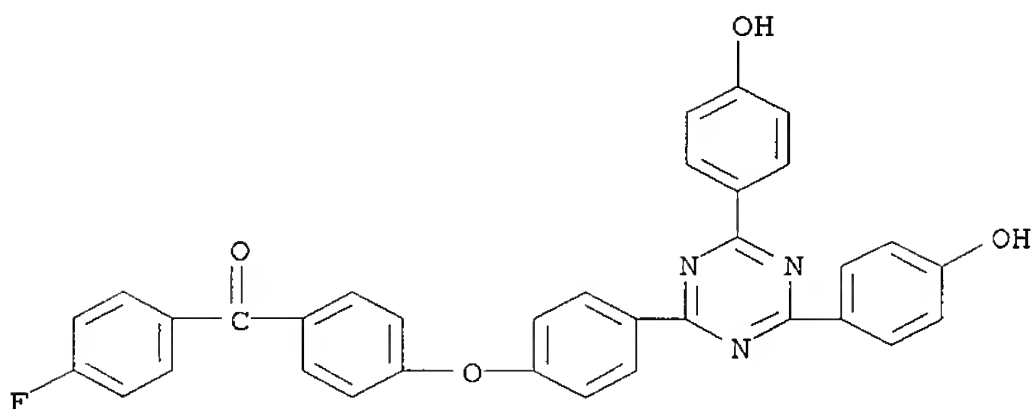
CMF (C34 H22 F N3 O4)x

CCI PMS

CM 3

CRN 336611-80-4

CMF C34 H22 F N3 O4



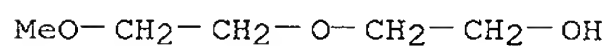
RN 336627-22-6 HCAPLUS

CN Methanone, [4-[4-[4,6-bis(4-hydroxyphenyl)-1,3,5-triazin-2-yl]phenoxy]phenyl](4-fluorophenyl)-, homopolymer, 2-(2-methoxyethoxy)ethyl ether (9CI) (CA INDEX NAME)

CM 1

CRN 111-77-3

CMF C5 H12 O3



CM 2

CRN 336611-81-5

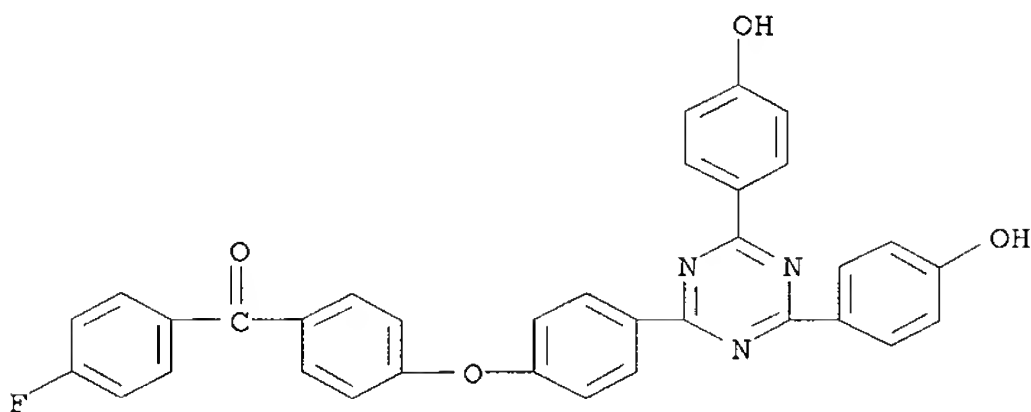
CMF (C34 H22 F N3 O4)x

CCI PMS

CM 3

CRN 336611-80-4

CMF C34 H22 F N3 O4



RN 336627-23-7 HCAPLUS

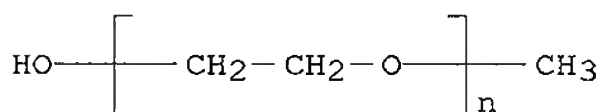
CN Methanone, [4-[4-[4,6-bis(4-hydroxyphenyl)-1,3,5-triazin-2-yl]phenoxy]phenyl](4-fluorophenyl)-, homopolymer, ether with .alpha.-methyl-.omega.-hydroxypoly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

CM 1

CRN 9004-74-4

CMF (C2 H4 O)_n C H4 O

CCI PMS



CM 2

CRN 336611-81-5

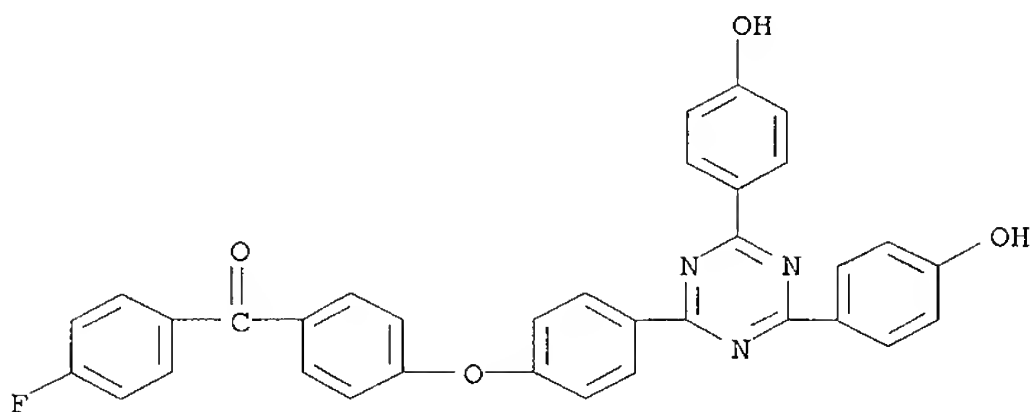
CMF (C34 H22 F N3 O4)_x

CCI PMS

CM 3

CRN 336611-80-4

CMF C34 H22 F N3 O4



RN 336627-24-8 HCAPLUS

CN Methanone, [4-[4-[4,6-bis(4-hydroxyphenyl)-1,3,5-triazin-2-yl]phenoxy]phenyl](4-fluorophenyl)-, homopolymer, octadecanoate (ester) (9CI) (CA INDEX NAME)

CM 1

CRN 57-11-4

CMF C18 H36 O2

HO₂C-(CH₂)₁₆-Me

CM 2

CRN 336611-81-5

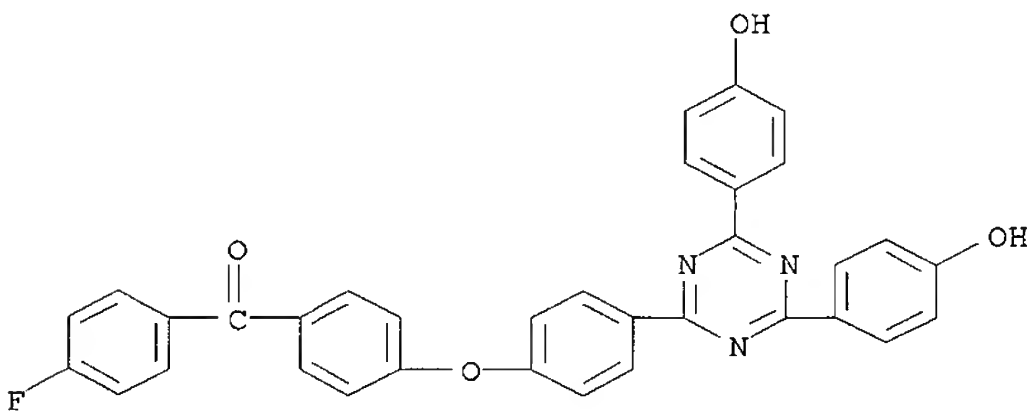
CMF (C34 H22 F N3 O4) x

CCI PMS

CM 3

CRN 336611-80-4

CMF C34 H22 F N3 O4



IT 336611-81-5P

RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation)

KATHLEEN FULLER EIC 1700/PARKER LAW 308-4290

; **PREP (Preparation)**; RACT (Reactant or reagent)
(prepn. of hyperbranched poly(ether ketone) analogs with heterocyclic triazine moiety)

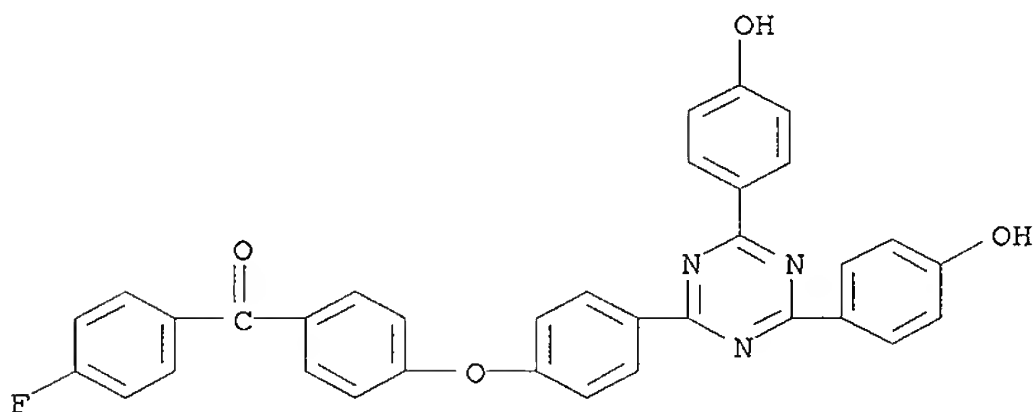
RN 336611-81-5 HCAPLUS

CN Methanone, [4-[4-[4,6-bis(4-hydroxyphenyl)-1,3,5-triazin-2-yl]phenoxy]phenyl](4-fluorophenyl)-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 336611-80-4

CMF C34 H22 F N3 O4



L13 ANSWER 4 OF 16 HCAPLUS COPYRIGHT 2003 ACS on STN

AN 2000:545486 HCAPLUS

DN 134:101245

TI Hyperbranched poly(ether sulfone) with 1,3,5-s-triazine moiety

AU Chang, Youngkyu; Kwon, Young Chul; Park, Kyusoon; Kim, Chulhee

CS Department of Polymer Science and Engineering, Inha University, Inchon, 402-751, S. Korea

SO Korea Polymer Journal (2000), 8(3), 142-146

CODEN: KPJOE2; ISSN: 1225-5947

PB Polymer Society of Korea

DT Journal

LA English

CC 35-5 (Chemistry of Synthetic High Polymers)

AB Hyperbranched poly(ether sulfone) analogs with the 1,3,5-s-triazine moiety were prepd. by the direct polymn. of AB2 type monomer, 2,4-bis(4-hydroxyphenyl)-6-(4-(4-(4-fluorobenzenesulfonyl)phenoxy)phenyl)-1,3,5-s-triazine. The selective reactivity of three chlorine atoms on cyanuric chloride toward nucleophiles provides an efficient route for the systematic synthesis of AB2 type triazine monomers and their hyperbranched polymers. The triazine rings influenced the structural and material characteristics of these hyperbranched polymers. The hyperbranched poly(ether sulfone) analog showed a glass transition at 295.degree.C, and was sol. in THF, 1,4-dioxane, and DMSO. An excellent thermal **stability** of the polymer was exhibited by a TGA anal., which showed that 5% wt. loss occurred at 480.degree.C.

ST hyperbranched polyether polysulfone triazine prepn characterization; glass temp polyether polysulfone triazine; thermal **stability** polyether polysulfone triazine

IT Glass transition temperature

Thermal **stability**

(of hyperbranched triazine-contg. polyether-polysulfones)
 IT Polysulfones, preparation
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (polyether-, dendrimers; prepn. and characterization of hyperbranched triazine-contg.)
 IT Dendritic polymers
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (polyether-polysulfones; prepn. and characterization of hyperbranched triazine-contg.)
 IT Polyethers, preparation
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (polysulfone-, dendrimers; prepn. and characterization of hyperbranched triazine-contg.)
 IT 319491-75-3P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. and characterization of hyperbranched)
 IT 319491-74-2P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (prepn. and polymn. of)
 IT 319491-73-1P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (prepn. and reaction with fluorobenzenesulfonyl chloride)
 IT 319491-72-0
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (prepn. and reaction with phenoxyphenylmagnesium chloride)
 IT 349-88-2, 4-Fluorobenzenesulfonyl chloride
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction with bis(methoxyphenyl)(phenoxyphenyl)triazine)
 IT 21473-02-9, 4-Phenoxyphenylmagnesium bromide
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction with cyanuric chloride)
 IT 108-77-0, Cyanuric chloride
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction with phenoxyphenylmagnesium chloride)

RE.CNT 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD
 RE

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IT 319491-75-3P

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and characterization of hyperbranched)

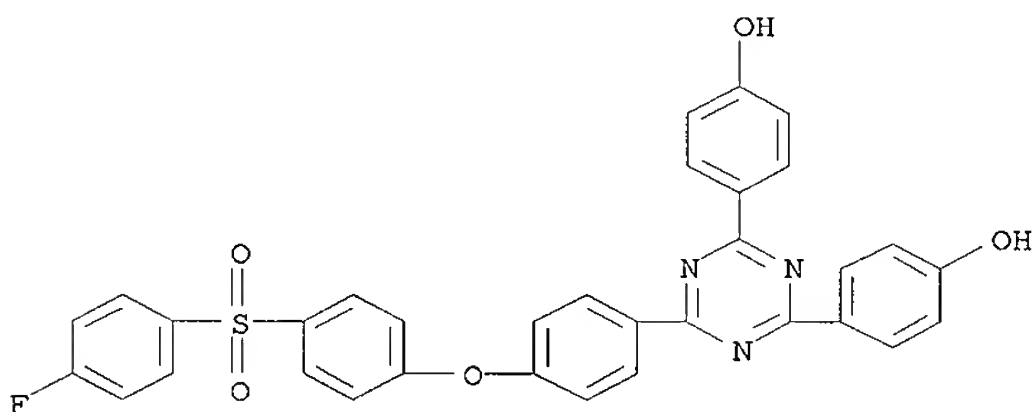
RN 319491-75-3 HCAPLUS

CN Phenol, 4,4'-[6-[4-[4-[(4-fluorophenyl)sulfonyl]phenoxy]phenyl]-1,3,5-triazine-2,4-diyl]bis-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 319491-74-2

CMF C33 H22 F N3 O5 S

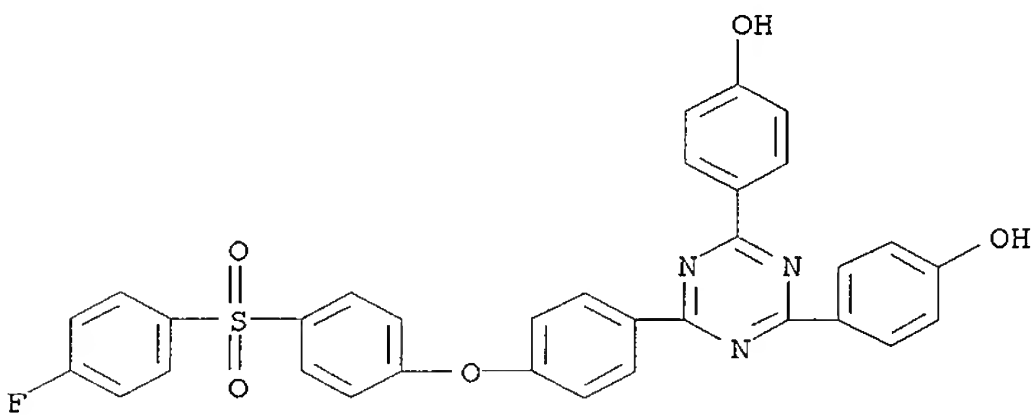


IT 319491-74-2P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and polymn. of)

RN 319491-74-2 HCAPLUS

CN Phenol, 4,4'-[6-[4-[4-[(4-fluorophenyl)sulfonyl]phenoxy]phenyl]-1,3,5-triazine-2,4-diyl]bis- (9CI) (CA INDEX NAME)

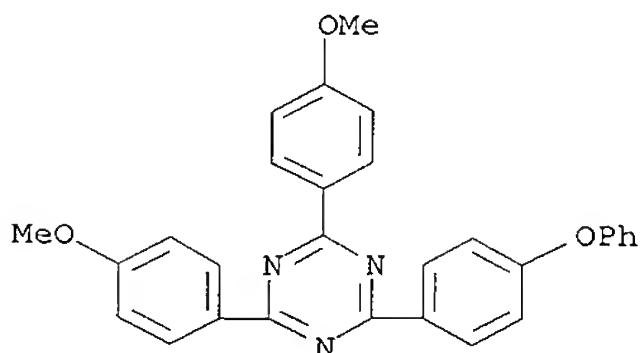


IT 319491-73-1P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and reaction with fluorobenzenesulfonyl chloride)

RN 319491-73-1 HCAPLUS

CN 1,3,5-Triazine, 2,4-bis(4-methoxyphenyl)-6-(4-phenoxyphenyl)- (9CI) (CA INDEX NAME)



- L13 ANSWER 5 OF 16 HCAPLUS COPYRIGHT 2003 ACS on STN
 AN 1998:642371 HCAPLUS
 DN 129:303196
 TI A comparison of hole blocking/electron transport polymers in organic LEDs
 AU Poesch, P.; Fink, R.; Thelakkat, M.; Schmidt, H.-W.
 CS Bayreuther Institut Makromolekulforschung, Universitaet Bayreuth, Bayreuth, D-95440, Germany
 SO Acta Polymerica (1998), 49(9), 487-494
 CODEN: ACPODY; ISSN: 0323-7648
 PB Wiley-VCH Verlag GmbH
 DT Journal
 LA English
 CC 37-5 (Plastics Manufacture and Processing)
 Section cross-reference(s): 73
 AB Three main-chain arom. polyethers with different electroactive heterocyclic moieties, 1,4-quinoxaline, 1,3,4-oxadiazole, and 1,3,5-triazine, were synthesized. The polymers are amorphous with glass transition temps. > 200.degree.. The polymers with these high electron affinity units were used as hole blocking/electron transport layers (HBETL) in light-emitting diodes (LEDs) having the HBETL cast on top of a hole transport/emitting PPV layer. In order to compare the influence of the different polyethers on the LED characteristics, 3 multilayer devices (ITO/PPV/HBETL/Al) with different HBETLs were investigated. Relative to the single layer PPV device, quantum efficiencies were improved by 2 orders of magnitude in all multilayer devices and power efficiency was increased using poly(quinoxaline ether) as HBETL. To investigate the electrochem. behavior of the 3 HBETLs, cyclic voltammetry measurements were carried out and the HOMO/LUMO energy values detd. from redox potentials were used to understand the hole blocking property. Lowering the onset voltage using the poly(quinoxaline ether) as HBETL in two-layer devices is compatible with the high electron affinity of this polymer.
 ST polyquinoxaline polyether redn potential electroluminescence LED;
 polyoxadiazole polyether redn potential electroluminescence LED;
 polytriazine polyether redn potential electroluminescence LED; redn potential electroluminescence LED arom polyether
 IT Polyethers, properties
 Polyethers, properties
 Polyethers, properties
 RL: DEV (Device component use); PRP (Properties); USES (Uses)
 (polycyanurate-, fluorine-contg.; prepn. of fluorine-contg. polyethers and properties of hole blocking/electron transport polymers in org. LEDs)
 IT Polyquinoxalines

Polyquinoxalines
 RL: DEV (Device component use); PRP (Properties); USES (Uses)
 (polyether-, arom.; prepn. of fluorine-contg. polyethers and properties
 of hole blocking/electron transport polymers in org. LEDs)

IT Polycyanurates
 Polycyanurates
 Polycyanurates
 RL: DEV (Device component use); PRP (Properties); USES (Uses)
 (polyether-, fluorine-contg.; prepn. of fluorine-contg. polyethers and
 properties of hole blocking/electron transport polymers in org. LEDs)

IT Polyoxadiazoles
 Polyoxadiazoles
 Polyoxadiazoles
 RL: DEV (Device component use); PRP (Properties); USES (Uses)
 (polyether-, fluorine-contg.; properties of hole blocking/electron
 transport polymers in org. LEDs)

IT Fluoropolymers, properties
 RL: DEV (Device component use); PRP (Properties); USES (Uses)
 (polyether-polycyanurate-; prepn. of fluorine-contg. polyethers and
 properties of hole blocking/electron transport polymers in org. LEDs)

IT Fluoropolymers, properties
 RL: DEV (Device component use); PRP (Properties); USES (Uses)
 (polyether-polyoxadiazole-; properties of hole blocking/electron
 transport polymers in org. LEDs)

IT Polyethers, properties
 Polyethers, properties
 Polyethers, properties
 RL: DEV (Device component use); PRP (Properties); USES (Uses)
 (polyoxadiazole-, fluorine-contg.; properties of hole blocking/electron
 transport polymers in org. LEDs)

IT Polyethers, properties
 Polyethers, properties
 RL: DEV (Device component use); PRP (Properties); USES (Uses)
 (polyquinoxaline-, arom.; prepn. of fluorine-contg. polyethers and
 properties of hole blocking/electron transport polymers in org. LEDs)

IT Electric current-potential relationship
 Electroluminescent devices
 HOMO (molecular orbital)
 LUMO (molecular orbital)
 Luminescence, electroluminescence
 Reduction potential
 (properties of hole blocking/electron transport polymers in org. LEDs)

IT Poly(arylenealkenylenes)
 RL: DEV (Device component use); PRP (Properties); USES (Uses)
 (properties of hole blocking/electron transport polymers in org. LEDs)

IT 50926-11-9, ITO
 RL: DEV (Device component use); PRP (Properties); USES (Uses)
 (prepn. of fluorine-contg. polyethers and properties of hole
 blocking/electron transport polymers in org. LEDs)

IT 173865-13-9P 176655-83-7P 188788-56-9P **188788-60-5P**
 RL: DEV (Device component use); PRP (Properties); **SPN (Synthetic
 preparation); PREP (Preparation); USES (Uses)**
 (prepn. of fluorine-contg. polyethers and properties of hole
 blocking/electron transport polymers in org. LEDs)

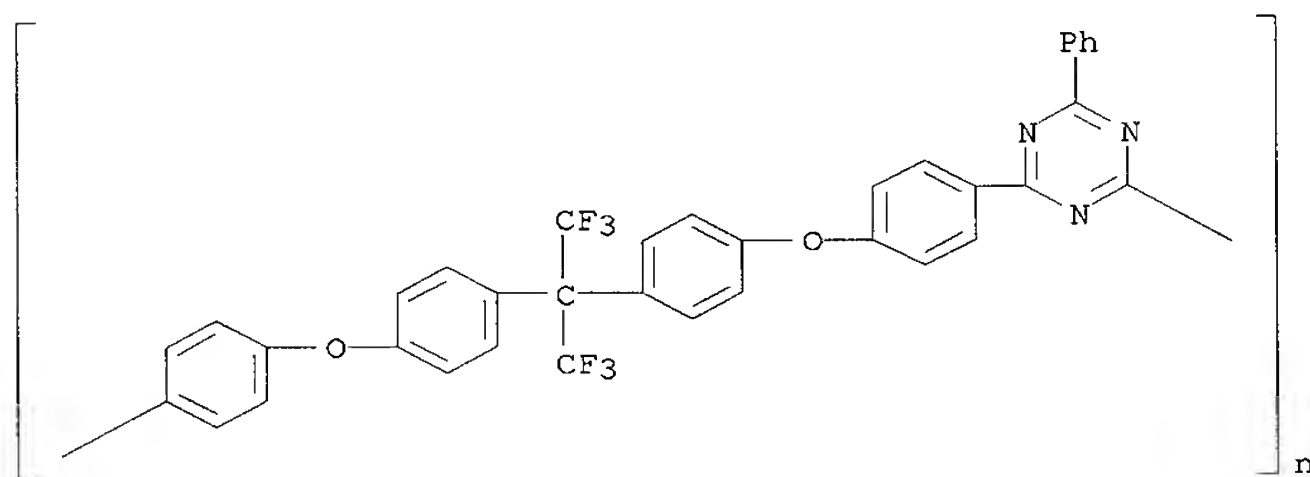
IT 37196-91-1
 RL: DEV (Device component use); PRP (Properties); USES (Uses)
 (prepn. of polyethers and properties of hole blocking/electron
 transport polymers in org. LEDs)

IT 7429-90-5, Aluminum, properties 96638-49-2, Poly(phenylene vinylene)
 RL: DEV (Device component use); PRP (Properties); USES (Uses)
 (properties of hole blocking/electron transport polymers in org. LEDs)

IT 188788-60-5P
 RL: DEV (Device component use); PRP (Properties); SPN (Synthetic
 preparation); PREP (Preparation); USES (Uses)
 (prepn. of fluorine-contg. polyethers and properties of hole
 blocking/electron transport polymers in org. LEDs)

RN 188788-60-5 HCAPLUS

CN Poly[(6-phenyl-1,3,5-triazine-2,4-diyl)-1,4-phenyleneoxy-1,4-
 phenylene[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]-1,4-phenyleneoxy-
 1,4-phenylene] (9CI) (CA INDEX NAME)



L13 ANSWER 6 OF 16 HCAPLUS COPYRIGHT 2003 ACS on STN

AN 1998:357645 HCAPLUS

DN 129:47336

TI New light-stabilizing hydroxyphenyl triazine

IN Hueglin, Dietmar; Van Toan, Vien; Luther, Helmut; Bulliard, Christophe;
 Rytz, Gerhard

PA Ciba Specialty Chemicals Holding Inc., Switz.

SO Ger. Offen., 126 pp.
 CODEN: GWXXBX

DT Patent

LA German

IC ICM C07D251-24
 ICS C09K015-30; C09D005-32; A61K007-42; C09B067-00; C08K005-3492;
 G03C011-10

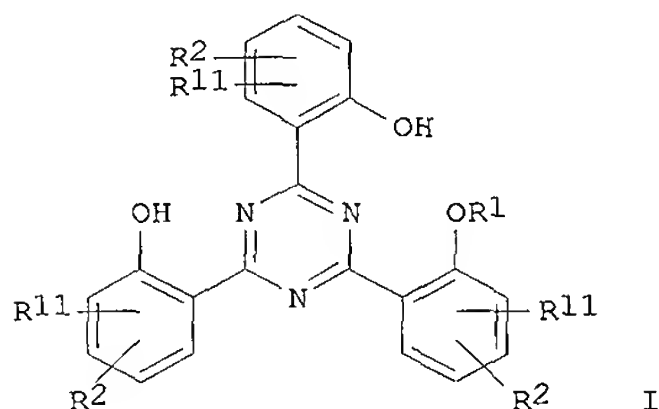
ICA C07D295-04; C07D249-20; C07D403-04

CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic and Other
 Reprographic Processes)
 Section cross-reference(s): 28, 62

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 19750906	A1	19980528	DE 1997-19750906	19971117
	GB 2319523	A1	19980527	GB 1997-22825	19971030
	GB 2319523	B2	20001108		
	CH 692916	A	20021213	CH 1997-2613	19971110
	SE 9704171	A	19980521	SE 1997-4171	19971114
	AU 9745207	A1	19980528	AU 1997-45207	19971114
	AU 734952	B2	20010628		

FR 2755966	A1	19980522	FR 1997-14417	19971118
FR 2755966	B1	20001013		
BE 1011550	A3	19991005	BE 1997-920	19971118
NO 9705305	A	19980522	NO 1997-5305	19971119
CN 1183410	A	19980603	CN 1997-123135	19971119
JP 10182621	A2	19980707	JP 1997-334915	19971119
BR 9704843	A	19981027	BR 1997-4843	19971119
ES 2135347	A1	19991016	ES 1997-2417	19971119
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AT 9701963	A	20020815	AT 1997-1963	19971119
AT 410317	B	20030325		
NL 1007590	A1	19980525	NL 1997-1007590	19971120
NL 1007590	C2	19981027		
US 6284821	B1	20010904	US 2000-715799	20001117
PRAI CH 1996-2864	A	19961120		
US 1997-974263	A3	19971119		
OS MARPAT 129:47336				
GI				



AB The hydroxyphenyl triazine is represented by a general formula I (R1 = C1-18-alkyl, C5-12-cycloalkyl, C3-18-alkenyl, Ph, etc.; R2 = C6-18-alkyl, C2-6-alkenyl, Ph, C7-11-phenylalkyl, etc.; R11 = H, C1-18-alkyl, C3-6-alkenyl, Ph, C7-11-phenylalkyl, halo, C1-18-alkoxy). The new compd. **stabilizes** org. materials which are suitable for use in plastics, coatings, cosmetic sunscreen materials or photog. materials.

ST hydroxyphenyl triazine photog **stabilizer** sunscreen; UV absorber
hydroxyphenyl triazine

IT Photographic **stabilizers**
Sunscreens

UV **stabilizers**

(new light-**stabilizing** hydroxyphenyl triazine)

IT	187393-04-0P	208343-24-2P	208343-25-3P	208343-26-4P	208343-27-5P
	208343-28-6P	208343-31-1P	208343-34-4P	208343-35-5P	
	208343-36-6P	208343-37-7P	208343-38-8P	208343-39-9P	208343-40-2P
	208343-41-3P	208343-42-4P	208343-43-5P	208343-44-6P	208343-45-7P
	208343-46-8P	208343-47-9P	208343-48-0P	208343-49-1P	208343-50-4P
	208343-51-5P	208343-52-6P	208343-53-7P	208343-54-8P	208343-55-9P
	208343-56-0P	208343-57-1P	208343-58-2P	208343-59-3P	208343-60-6P
	208343-61-7P	208343-62-8P	208343-63-9P	208343-64-0P	208343-65-1P

RL: MOA (Modifier or additive use); **SPN (Synthetic preparation)**;

PREP (Preparation); **USES (Uses)**

(in prepn. of new light-**stabilizing** hydroxyphenyl triazine)

IT 64-67-5, Diethyl sulfate 75-26-3, 2-Bromopropane 77-78-1,
Dimethylsulfate 78-76-2, 2-Bromobutane 78-77-3, 1-Bromo-2-
methylpropane 105-36-2, Ethylbromoacetate 106-86-5, 4-Vinylcyclohexane
1,2-epoxide 106-94-5, 1-Bromopropane 107-82-4, 1-Bromo-3-methylbutane
109-65-9, 1-Bromobutane 110-53-2, 1-Bromopentane 111-25-1,
1-Bromohexane 111-83-1, 1-Bromooctane 112-82-3, 1-Bromohexadecane
123-04-6, 3-Chloromethyl-heptane 143-15-7, 1-Bromododecane 535-11-5,
2-Bromo-propionic acid ethyl ester 584-08-7, Potassium carbonate
629-04-9, 1-Bromoheptane 1310-58-3, Potassium hydroxide, reactions
1530-32-1, Ethyl triphenyl phosphonium bromide 2125-23-7 2426-08-6,
n-Butyl-glycidyl ether 7681-11-0, Potassium iodide (KI), reactions
148236-55-9

RL: RCT (Reactant); RACT (Reactant or reagent)

(in prepn. of new light-stabilizing hydroxyphenyl triazine)

IT 3135-19-1P 13681-75-9P 107387-07-5P 208343-66-2P 208343-67-3P
208343-68-4P 208343-69-5P 208343-70-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)

(in prepn. of new light-stabilizing hydroxyphenyl triazine)

IT 208343-31-1P 208343-34-4P

RL: MOA (Modifier or additive use); SPN (Synthetic preparation);

PREP (Preparation); USES (Uses)

(in prepn. of new light-stabilizing hydroxyphenyl triazine)

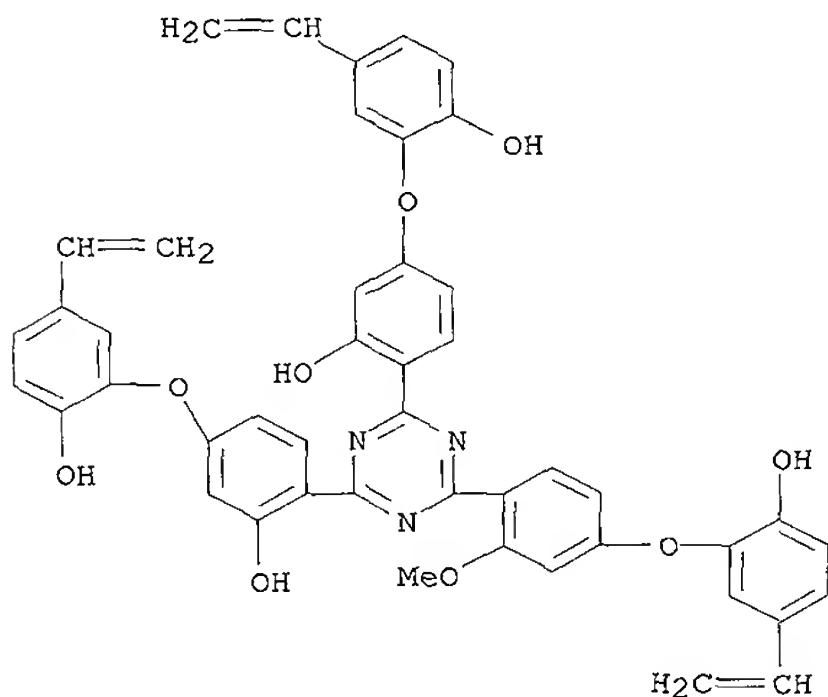
RN 208343-31-1 HCAPLUS

CN Phenol, 2,2'-[6-[4-(4-ethenyl-2-hydroxyphenoxy)-2-methoxyphenyl]-1,3,5-
triazine-2,4-diyl]bis[5-(4-ethenyl-2-hydroxyphenoxy)-, mixt. with
2,2'-[6-[4-(5-ethenyl-2-hydroxyphenoxy)-2-methoxyphenyl]-1,3,5-triazine-
2,4-diyl]bis[5-(5-ethenyl-2-hydroxyphenoxy)phenol] (9CI) (CA INDEX NAME)

CM 1

CRN 208343-30-0

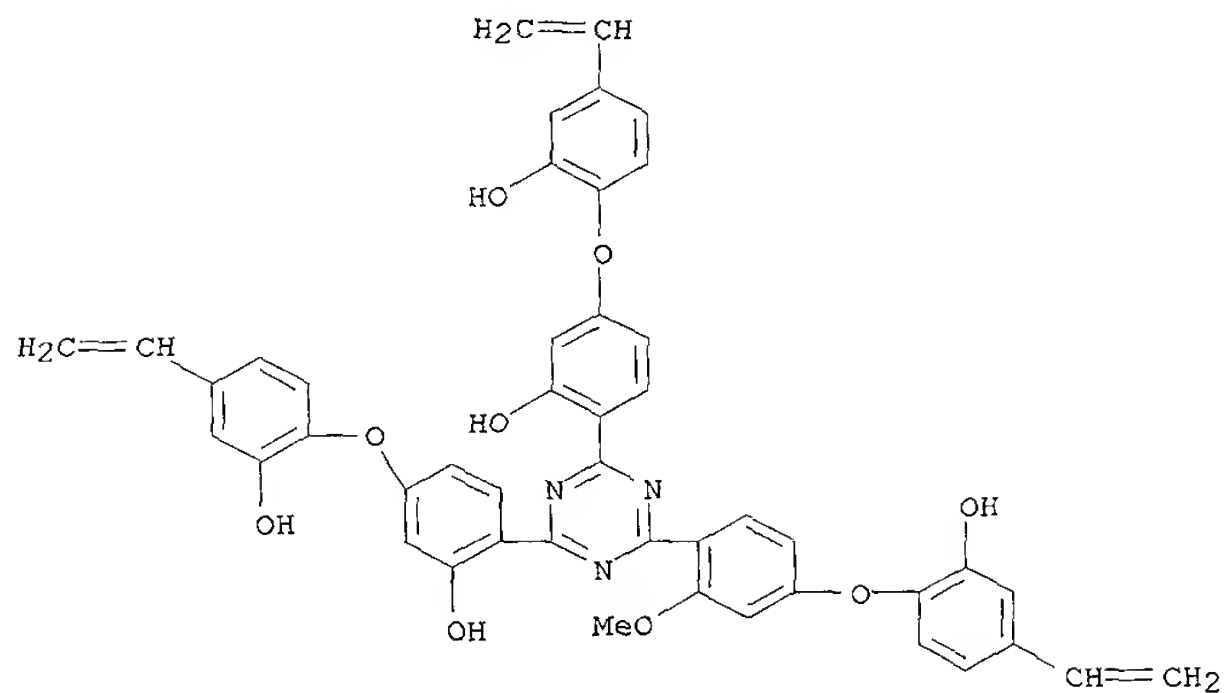
CMF C46 H35 N3 O9



CM 2

CRN 208343-29-7

CMF C46 H35 N3 O9



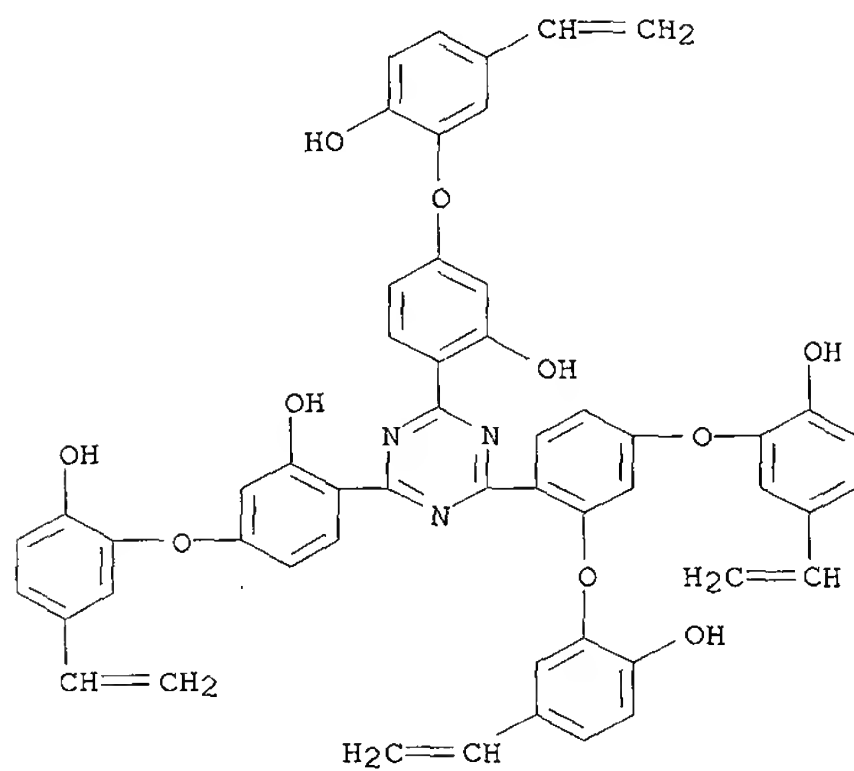
RN 208343-34-4 HCAPLUS

CN Phenol, 2,2'-[6-[2,4-bis(4-ethenyl-2-hydroxyphenoxy)phenyl]-1,3,5-triazine-2,4-diyl]bis[5-(4-ethenyl-2-hydroxyphenoxy)-, mixt. with
2,2'-[6-[2,4-bis(5-ethenyl-2-hydroxyphenoxy)phenyl]-1,3,5-triazine-2,4-diyl]bis[5-(5-ethenyl-2-hydroxyphenoxy)phenol] (9CI) (CA INDEX NAME)

CM 1

CRN 208343-33-3

CMF C53 H39 N3 O10

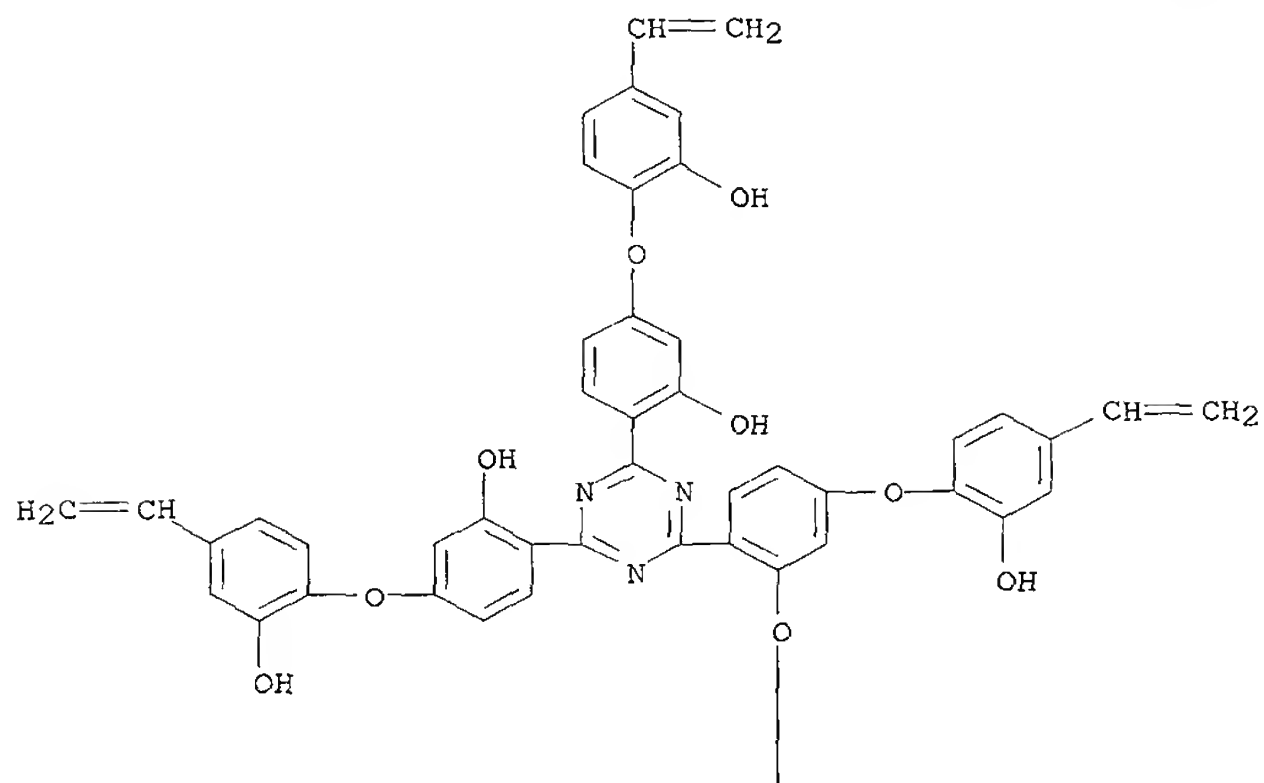


CM 2

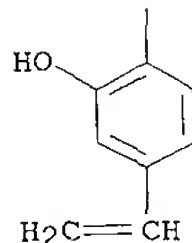
CRN 208343-32-2

CMF C53 H39 N3 O10

PAGE 1-A



PAGE 2-A



L13 ANSWER 7 OF 16 HCAPLUS COPYRIGHT 2003 ACS on STN

AN 1998:183954 HCAPLUS

DN 128:244520

TI Triazine polymers and their use in electroluminescent arrangements

IN Wehrmann, Rolf; Schmidt, Hans-Werner; Fink, Ralph; Thelakkat, Mukundan

PA Bayer A.-G., Germany; Wehrmann, Rolf; Schmidt, Hans-Werner; Fink, Ralph; Thelakkat, Mukundan

SO PCT Int. Appl., 55 pp.

CODEN: PIXXD2

DT Patent

LA German

IC ICM C08G073-06

ICS C08G073-10; C09K011-06

CC 35-5 (Chemistry of Synthetic High Polymers)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9811150	A1	19980319	WO 1997-EP4802	19970904
	W: JP, KR, US				
	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	DE 19644930	A1	19980319	DE 1996-19644930	19961029
	EP 925319	A1	19990630	EP 1997-943830	19970904
	EP 925319	B1	20011205		
	R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, NL, SE, PT, IE, FI				
	JP 2001503077	T2	20010306	JP 1998-513219	19970904
	AT 210163	E	20011215	AT 1997-943830	19970904
	ES 2168144	T3	20020601	ES 1997-943830	19970904
	KR 2000036127	A	20000626	KR 1999-702161	19990315
PRAI	DE 1996-19637600	A	19960916		
	DE 1996-19644930	A	19961029		
	WO 1997-EP4802	W	19970904		

AB Triazine-based polyethers and polyimides suitable for use in electroluminescent devices are prepd. from dihalo s-triazines or s-triazine diamines and bisphenols or arom. dianhydrides. Thus, 2,4-bis(4-fluorophenyl)-6-phenyl-s-triazine was treated with bisphenol AF in the presence of potassium carbonate to give a copolymer having no.-av. mol. wt. 26 .times. 103 and glass transition temp. 241.degree.. A polyether prepd. from bisphenol AF and 2,4-bis(4-fluorophenyl)-6-(3-quinolyl)-s-triazine was used in the fabrication of a light emitting diode composed of indium-tin oxide, poly(p-phenylenevinylene), polyether and aluminum. The diode displayed onset voltage 4 V, PMmax 4 .times. 10⁻⁶, and Imax 50, vs. 4 V, 5 .times. 10⁻¹⁰, and 300, resp., for a diode prepd. with the polyether layer.

ST triazine based fluorine contg polymer; polyether triazine based fluorine

- contg; polyimide triazine based fluorine contg; light emitting diode triazine based polymer; electroluminescent device triazine based polymer
- IT Polyethers, preparation
Polyimides, preparation
RL: SPN (Synthetic preparation); PREP (Preparation)
(fluorine- and triazine group-contg.; triazine polymers for use in electroluminescent arrangement)
- IT Polyethers, preparation
Polyimides, preparation
RL: SPN (Synthetic preparation); PREP (Preparation)
(fluorine-contg., triazine group-contg.; triazine polymers for use in electroluminescent arrangement)
- IT Polymerization
(of triazine derivs. with bisphenols and arom. dianhydrides)
- IT Fluoropolymers, preparation
Fluoropolymers, preparation
RL: SPN (Synthetic preparation); PREP (Preparation)
(polyether-, triazine group-contg.; triazine polymers for use in electroluminescent arrangement)
- IT Fluoropolymers, preparation
Fluoropolymers, preparation
RL: SPN (Synthetic preparation); PREP (Preparation)
(polyimide-, triazine group-contg.; triazine polymers for use in electroluminescent arrangement)
- IT Electroluminescent devices
(triazine polymers for use in)
- IT 188788-80-9P
RL: DEV (Device component use); SPN (Synthetic preparation);
PREP (Preparation); USES (Uses)
(in prepn. of triazine polymers for use in electroluminescent arrangements)
- IT 90-30-2P, N-(1-Naphthyl)-aniline 351-98-4P 22961-45-1P,
N-(4-Pyridyl)-aniline
RL: SPN (Synthetic preparation); PREP (Preparation)
(in prepn. of triazine polymers for use in electroluminescent arrangements)
- IT 456-14-4P, 4-Fluorobenzamidinium hydrochloride
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(intermediate; in prepn. of triazine polymers for use in electroluminescent arrangements)
- IT 31207-01-9P 157141-82-7P, 2,4-Bis(4-fluorophenyl)-6-phenyl-s-triazine
188788-62-7P 188788-67-2P 188788-74-1P 188788-78-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(monomer; for prepn. of triazine polymers for use in electroluminescent arrangements)
- IT 62-53-3, Benzenamine, reactions 538-51-2, N-Benzylideneaniline
1194-02-1, 4-Fluorobenzonitrile 3459-99-2, 3-Nitrobenzamidinium
RL: RCT (Reactant); RACT (Reactant or reagent)
(reactant; in prepn. of triazine polymers for use in electroluminescent arrangements)
- IT 188788-79-6P
RL: DEV (Device component use); SPN (Synthetic preparation); PREP
(Preparation); USES (Uses)
(triazine polymers for use in electroluminescent arrangements)
- IT 188788-56-9P 188788-60-5P 188788-63-8P 188788-65-0P
188788-68-3P 188788-70-7P 188788-75-2P 188788-77-4P

204910-08-7P 204910-09-8P 204910-10-1P 204910-11-2P

RL: SPN (Synthetic preparation); PREP (Preparation)

(triazine polymers for use in electroluminescent arrangements)

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Allied Corp; EP 0129036 A 1984 HCAPLUS
- (2) Fink; PAPERS PRESENTED AT THE SAN FRANCISCO, CALIFORNIA MEETING 1997, V38(1), P323 HCAPLUS
- (3) Griffin, W; US 4102872 A 1978
- (4) Hoechst Ag; EP 0668529 A 1995 HCAPLUS
- (5) Kray, R; US 3803075 A 1974 HCAPLUS

IT 188788-80-9P

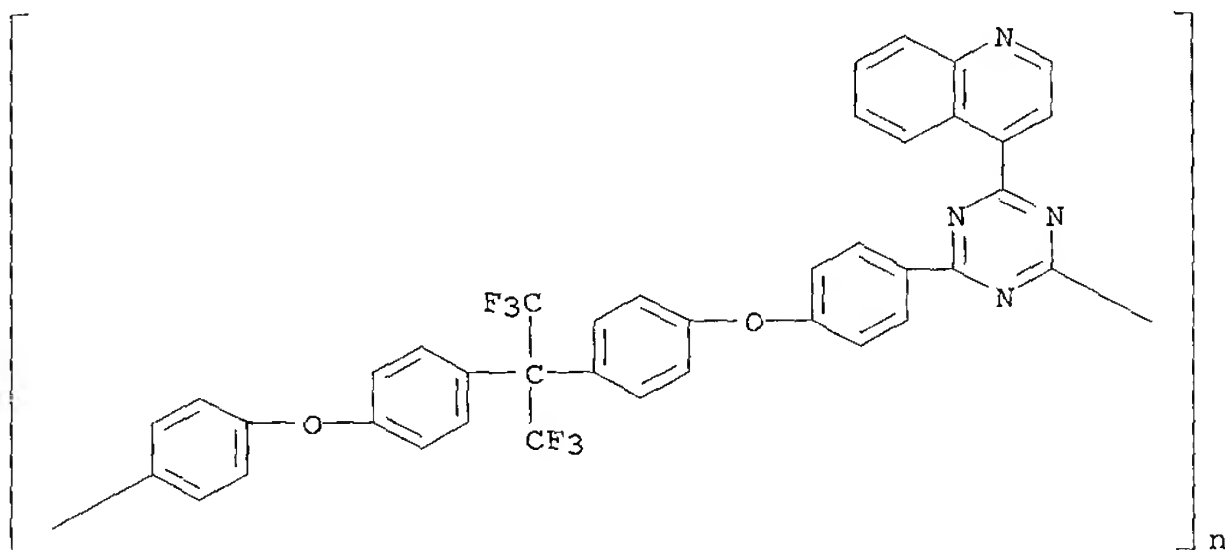
RL: DEV (Device component use); SPN (Synthetic preparation);

PREP (Preparation); USES (Uses)

(in prepn. of triazine polymers for use in electroluminescent arrangements)

RN 188788-80-9 HCAPLUS

CN Poly[[6-(4-quinolinyl)-1,3,5-triazine-2,4-diyl]-1,4-phenyleneoxy-1,4-phenylene[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]-1,4-phenyleneoxy-1,4-phenylene] (9CI) (CA INDEX NAME)



IT 188788-60-5P 188788-65-0P 188788-70-7P

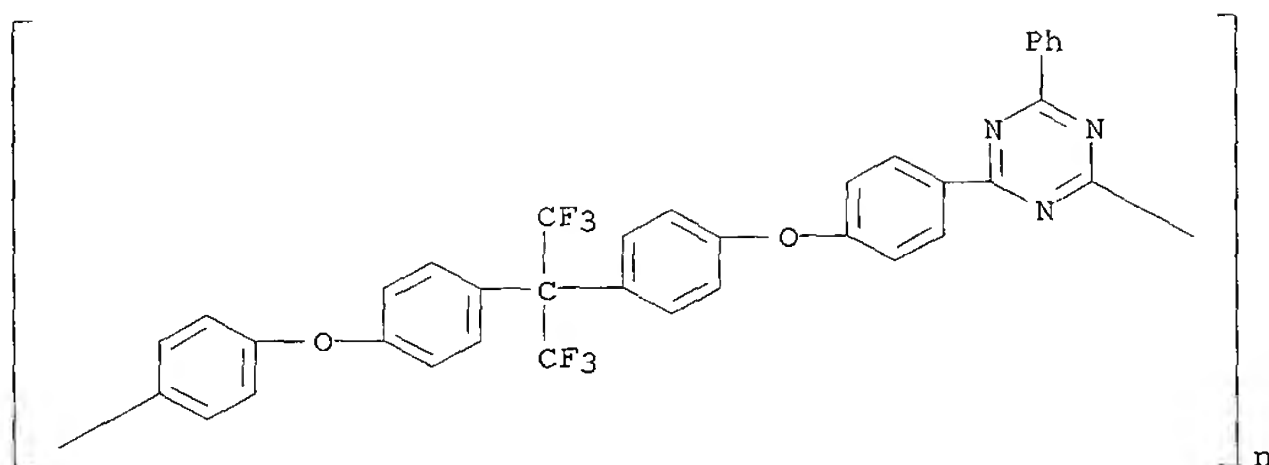
188788-77-4P

RL: SPN (Synthetic preparation); PREP (Preparation)

(triazine polymers for use in electroluminescent arrangements)

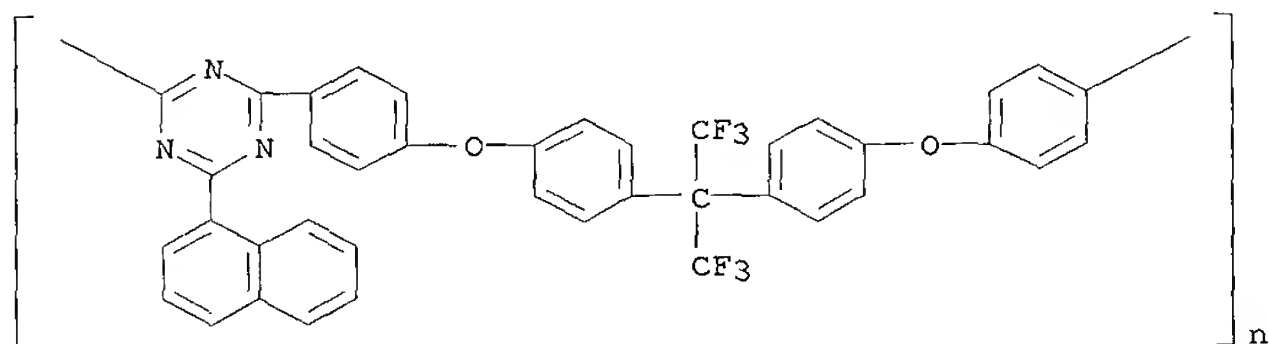
RN 188788-60-5 HCAPLUS

CN Poly[(6-phenyl-1,3,5-triazine-2,4-diyl)-1,4-phenyleneoxy-1,4-phenylene[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]-1,4-phenyleneoxy-1,4-phenylene] (9CI) (CA INDEX NAME)



RN 188788-65-0 HCAPLUS

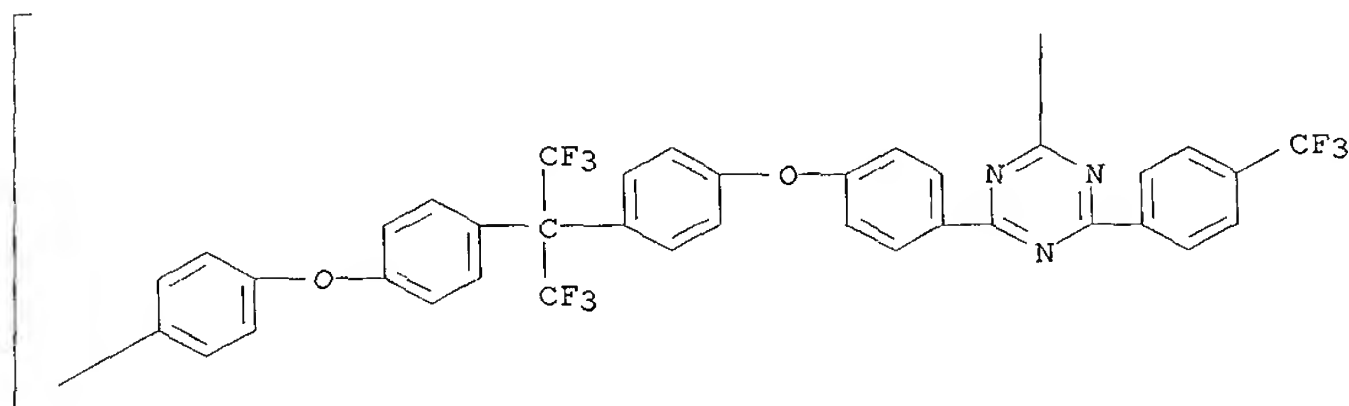
CN Poly[[6-(1-naphthalenyl)-1,3,5-triazine-2,4-diyl]-1,4-phenyleneoxy-1,4-phenylene[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]-1,4-phenyleneoxy-1,4-phenylene] (9CI) (CA INDEX NAME)



RN 188788-70-7 HCAPLUS

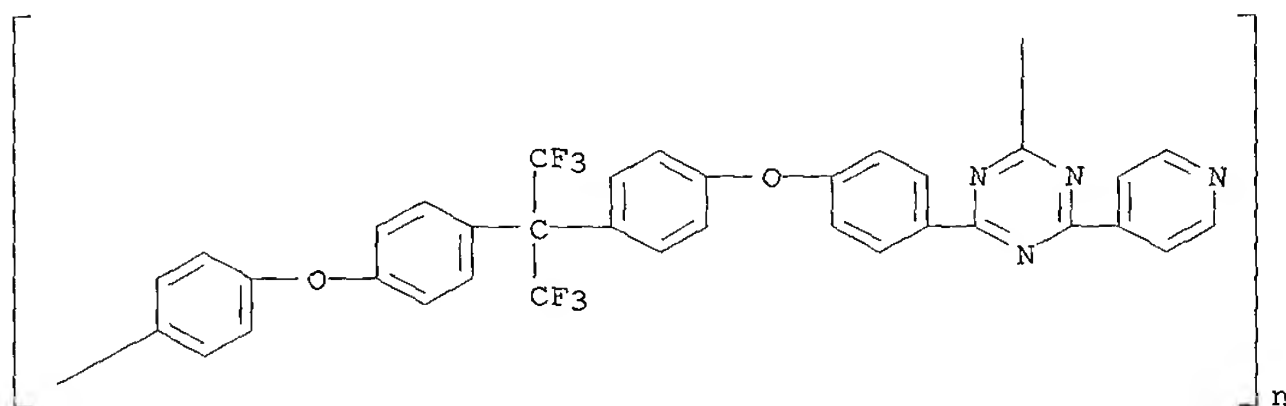
CN Poly[[6-[4-(trifluoromethyl)phenyl]-1,3,5-triazine-2,4-diyl]-1,4-phenyleneoxy-1,4-phenylene[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]-1,4-phenyleneoxy-1,4-phenylene] (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

RN	188788-77-4	HCAPLUS
CN	Poly[[6-(4-pyridinyl)-1,3,5-triazine-2,4-diyl]-1,4-phenyleneoxy-1,4-phenylene[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]-1,4-phenyleneoxy-1,4-phenylene] (9CI) (CA INDEX NAME)	



L13 ANSWER 8 OF 16 HCAPLUS COPYRIGHT 2003 ACS on STN
AN 1998:90698 HCAPLUS
DN 128:186037
TI Aromatic ethers with 1,3,5-triazine units as hole blocking/electron transport materials in LEDs
AU Fink, Ralf; Frenz, Carsten; Thelakkat, Mukundan; Schmidt, Hans-Werner
CS Makromolekulare Chemie I, Bayreuther Institut Makromolekulforschung, Universitat Bayreuth, Bayreuth, 95440, Germany
SO Proceedings of SPIE-The International Society for Optical Engineering (1997), 3148(Organic Light-Emitting Materials and Devices), 194-200
CODEN: PSISDG; ISSN: 0277-786X
PB SPIE-The International Society for Optical Engineering
DT Journal
LA English
CC 73-5 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 38, 76
AB Various fluoro-functionalized arom. 1,3,5-triazine monomers were prep'd. A series low molar mass and poly-(1,3,5-triazine)-ethers were synthesized by a condensation reaction. The polymers as well as the low molar mass compds. have excellent thermal **stability** and are amorphous. To examine the potential to apply these compds. in org. electroluminescent

KATHLEEN FULLER EIC 1700/PARKER LAW 308-4290

devices, the redox properties were studied by cyclic voltammetry. The monomers have high electron affinity and reach LUMO values at -2.7 to -3.1 eV. Addnl. high oxidn. **stability** with HOMO values <-6.4 eV follows hole blocking capabilities. This opens the possibility to use 1,3,5-triazine contg. materials as electron injecting/hole blocking layer in LEDs. First LED results are in agreement to these high electron affinities.

ST arom ether triazine hole blocking LED

IT Electroluminescent devices

(arom. ethers with triazine units as hole blocking/electron transport materials in)

IT Polymers, properties

RL: DEV (Device component use); PRP (Properties); USES (Uses)

(arom. ethers with triazine units as hole blocking/electron transport materials in LEDs)

IT Electric transport properties

(arom. ethers with triazine units in LEDs for)

IT Hole (electron)

(arom. ethers with triazine units in LEDs for blocking)

IT Ethers, properties

RL: DEV (Device component use); PRP (Properties); USES (Uses)

(arom.; with triazine units as hole blocking/electron transport materials in LEDs)

IT Redox reaction

(electrochem.; arom. ethers with triazine units as hole blocking/electron transport materials in LEDs)

IT Aromatic hydrocarbons, properties

RL: DEV (Device component use); PRP (Properties); USES (Uses)

(ethers; with triazine units as hole blocking/electron transport materials in LEDs)

IT 157141-82-7 184895-07-6 188788-60-5 188788-62-7

188788-65-0 188788-78-5 188788-80-9 203450-08-2

203450-09-3 203450-10-6

RL: DEV (Device component use); PRP (Properties); USES (Uses)

(hole blocking/electron transport materials in LEDs)

IT 618-39-3, Benzamidine 2339-59-5, 4-Fluorobenzamidine

RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction with anilidene derivs.)

IT 538-51-2 890-50-6 5676-81-3 13213-06-4

RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction with benzamidine derivs.)

IT 1478-61-1

RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction with triazine units)

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Kricheldorf, H; "Handbook of Polymer Synthesis", Chap 9 1992

(2) Pommerehne, J; Adv Mater 1995, V7(6), P551 HCAPLUS

(3) Solomon, D; "Step-Growth Polymerizations", Chap 5 1972

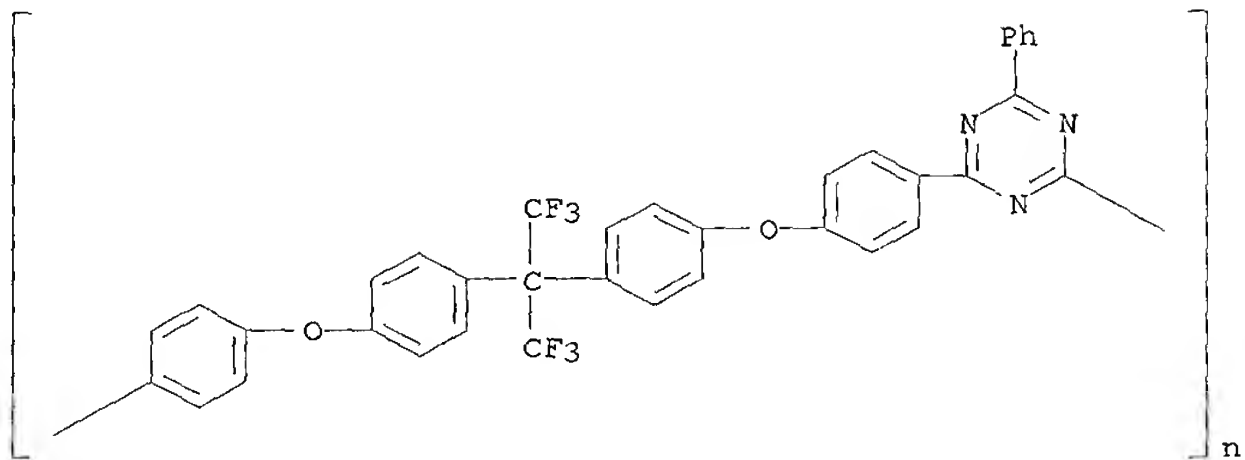
IT 188788-60-5 188788-65-0 188788-80-9

RL: DEV (Device component use); PRP (Properties); USES (Uses)

(hole blocking/electron transport materials in LEDs)

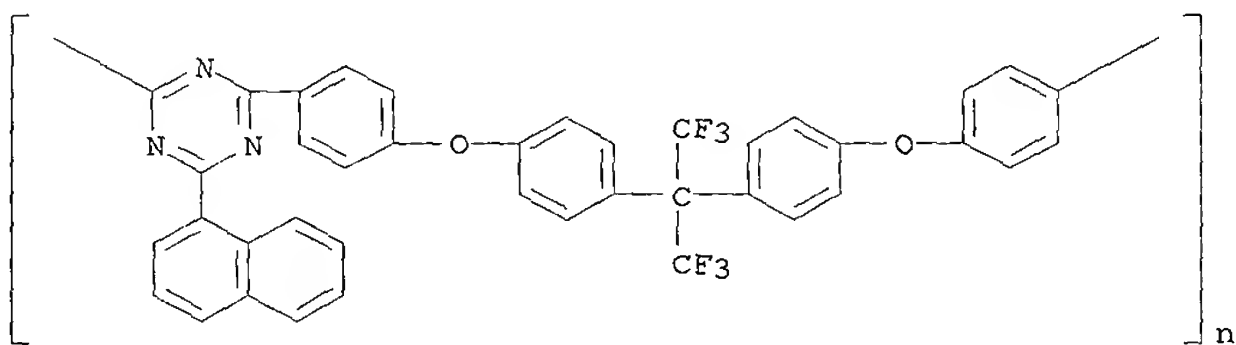
RN 188788-60-5 HCAPLUS

CN Poly[(6-phenyl-1,3,5-triazine-2,4-diyl)-1,4-phenyleneoxy-1,4-phenylene[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]-1,4-phenyleneoxy-1,4-phenylene] (9CI) (CA INDEX NAME)



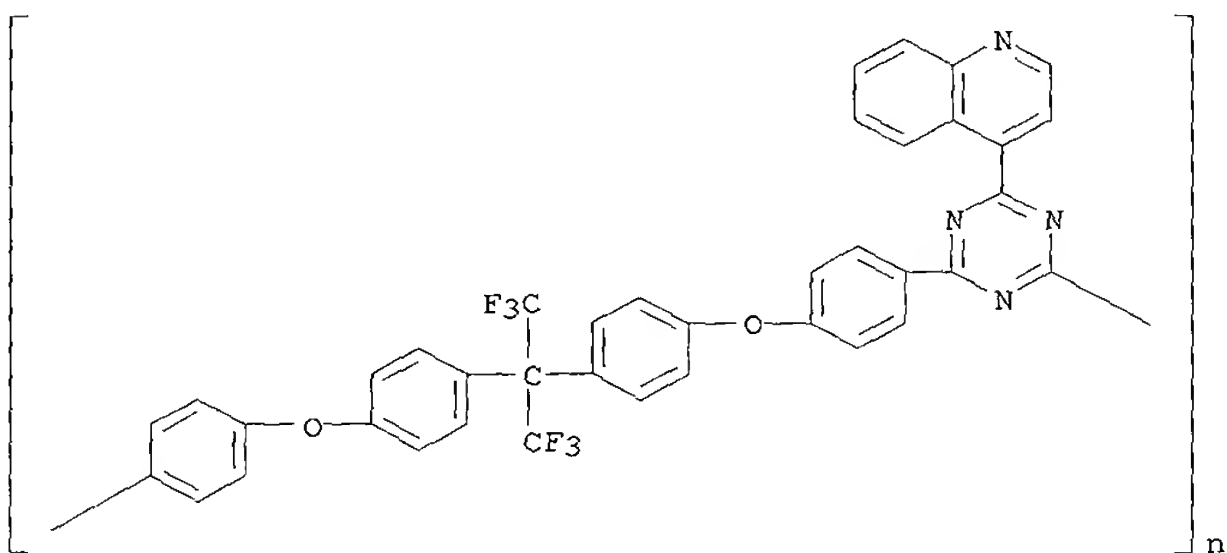
RN 188788-65-0 HCAPLUS

CN Poly[[6-(1-naphthalenyl)-1,3,5-triazine-2,4-diyl]-1,4-phenyleneoxy-1,4-phenylene[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]-1,4-phenyleneoxy-1,4-phenylene] (9CI) (CA INDEX NAME)



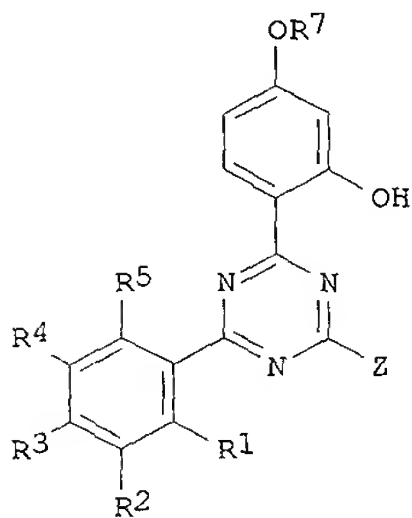
RN 188788-80-9 HCAPLUS

CN Poly[[6-(4-quinolinyl)-1,3,5-triazine-2,4-diyl]-1,4-phenyleneoxy-1,4-phenylene[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]-1,4-phenyleneoxy-1,4-phenylene] (9CI) (CA INDEX NAME)



L13 ANSWER 9 OF 16 HCAPLUS COPYRIGHT 2003 ACS on STN
 AN 1998:38906 HCAPLUS
 DN 128:76146
 TI Hydroxyphenyltriazine **stabilizers** for polymer compositions
 IN Birbaum, Jean-Luc; Toan, Vien Van; Valet, Andreas; Meuwly, Roger
 PA Ciba-Geigy A.-G., Switz.
 SO Brit. UK Pat. Appl., 66 pp.
 CODEN: BAXXDU
 DT Patent
 LA English
 IC ICM C07D251-24
 CC 37-6 (Plastics Manufacture and Processing)
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	GB 2312210	A1	19971022	GB 1997-5854	19970321
	GB 2312210	B2	19980819		
	CH 692739	A	20021015	CH 1997-638	19970317
	SE 9701012	A	19971104	SE 1997-1012	19970319
	AU 9716441	A1	19971002	AU 1997-16441	19970320
	AU 731977	B2	20010412		
	US 5959008	A	19990928	US 1997-828200	19970321
	BE 1012428	A3	20001107	BE 1997-253	19970321
	CA 2200807	AA	19970926	CA 1997-2200807	19970324
	DE 19712277	A1	19971030	DE 1997-19712277	19970324
	ZA 9705233	A	19970926	ZA 1997-2533	19970325
	FR 2747122	A1	19971010	FR 1997-3596	19970325
	FR 2747122	B1	20030117		
	CN 1171422	A	19980128	CN 1997-109694	19970325
	CN 1104476	B	20030402		
	BR 9701462	A	19980825	BR 1997-1462	19970325
	ES 2130985	A1	19990701	ES 1997-638	19970325
	ES 2130985	B1	20000301		
	TW 449610	B	20010811	TW 1997-86103743	19970325
	NL 1005651	A1	19970930	NL 1997-1005651	19970326
	NL 1005651	C2	20000619		
	JP 10045729	A2	19980217	JP 1997-113299	19970326
PRAI	CH 1996-783	A	19960326		
OS	MARPAT 128:76146				
GI					



I

AB The compds. I (Z is an arom. group; R1-5 are H, alkyl, etc., R6 is alkyl, acid or ester, or Ph, and R7 is an ester-contg. radical) are useful as **stabilizers** against light, O, or heat in org. polymer compns. 2,4-Diphenyl-6-(2-hydroxy-4-[(1-methoxycarbonyl)ethoxy]phenyl)-1,3,5-triazine was prep'd. from 2,4-Diphenyl-6-(2,4-dihydroxyphenyl)-1,3,5-triazine and Me 2-bromopropionate.

ST hydroxyphenyl triazine **stabilizer**; heat light **stabilizer** triazine compd; antioxidant triazine compd

IT Antioxidants
Coating materials
Heat **stabilizers**
Light **stabilizers**
(hydroxyphenyltriazine **stabilizers** for polymer compns.)

IT 137658-77-6P 138968-45-3P 148898-78-6P 200410-56-6P
200410-57-7P 200410-58-8P 200410-65-7P 200410-66-8P
200410-67-9P 200410-68-0P 200410-69-1P 200410-70-4P 200410-71-5P
200410-72-6P 200410-73-7P 200410-74-8P 200410-75-9P 200410-76-0P
200410-77-1P 200410-78-2P 200410-79-3P 200410-80-6P 200410-81-7P
200410-82-8P 200410-83-9P 200410-84-0P 200410-85-1P 200410-86-2P
200410-87-3P 200410-88-4P 200410-89-5P 200410-90-8P 200410-91-9P
200410-92-0P 200410-93-1P 200410-94-2P 200410-95-3P 200410-96-4P
200410-97-5P 200702-98-3P 200702-99-4P 200703-00-0P
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)
(hydroxyphenyltriazine **stabilizers** for polymer compns.)

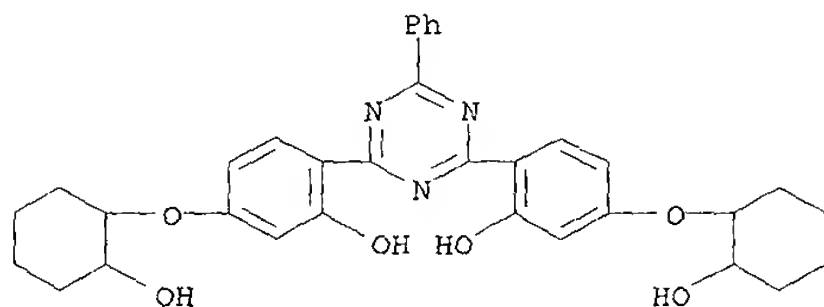
IT 137930-64-4P 167323-90-2P, Additol VXL 1381-Synthacryl VSC 1436 copolymer 189751-54-0P
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(hydroxyphenyltriazine **stabilizers** for polymer compns.)

IT 75-36-5, Acetyl chloride 112-13-0, Decanoyl chloride 112-16-3, Lauric acid chloride 286-20-4, Cyclohexene oxide 535-11-5 600-00-0
615-96-3 1668-53-7 2125-25-9 2426-08-6 3282-30-2, Pivaloyl chloride 5445-17-0, Methyl 2-bromopropionate 5445-21-6 5445-29-4
5445-40-9 38369-95-8 38675-02-4 51183-18-7 86711-84-4
148898-74-2 200410-59-9 200410-60-2 200410-62-4 200410-63-5
200410-64-6 200702-97-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(hydroxyphenyltriazine **stabilizers** for polymer compns.)

IT **200410-57-7P**
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)
(hydroxyphenyltriazine **stabilizers** for polymer compns.)

RN 200410-57-7 HCAPLUS

CN Phenol, 2,2'-(6-phenyl-1,3,5-triazine-2,4-diyl)bis[5-[(2-hydroxycyclohexyl)oxy]- (9CI) (CA INDEX NAME)



L13 ANSWER 10 OF 16 HCAPLUS COPYRIGHT 2003 ACS on STN
AN 1997:805966 HCAPLUS
DN 128:3895
TI Synthesis and Characterization of Aromatic Poly(1,3,5-triazine-ether)s for
Electroluminescent Devices
AU Fink, Ralf; Frenz, Carsten; Thelakkat, Mukundan; Schmidt, Hans-Werner
CS Makromolekulare Chemie I and Bayreuther Institut fuer
Makromolekulforschung (BIMF), Universitaet Bayreuth, Bayreuth, 95440,
Germany
SO Macromolecules (1997), 30(26), 8177-8181
CODEN: MAMOBX; ISSN: 0024-9297
PB American Chemical Society
DT Journal
LA English
CC 35-2 (Chemistry of Synthetic High Polymers)
AB Various difluoro functionalized arom. 1,3,5-triazine monomers were prepd.
A series of poly(1,3,5-triazine-ether)s was synthesized by
polycondensation with 4,4'-hexafluoroisopropylidenebis[phenol]. The
polymers have excellent thermal **stability** and are amorphous with
glass transition temps. in the range 190-250.degree.. In order to examine
the potential application these polymers may possess for use in org.
electroluminescent devices, the redox properties were studied by cyclic
voltammetry. The monomers have high electron affinities and reach LUMO
values in the range of -2.7 to -3.1 eV. This opens the possibility to
utilize 1,3,5-triazine-contg. materials as electron injecting/hole
blocking layers in light emitting devices (LEDs). Initial LED results are
in accordance with these high electron affinities.
ST difluoro triazine monomer prepn polymn
IT Polyethers, preparation
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(fluorine- and triazine group-contg.; synthesis and characterization of
arom. poly(1,3,5-triazine-ethers) for use in multilayer light emitting
devices)
IT Polyethers, preparation
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(fluorine-contg., triazine group-contg.; synthesis and characterization
of arom. poly(1,3,5-triazine-ethers) for use in multilayer light
emitting devices)
IT Polymerization
(of arom. difluoro triazine derivs. with hexafluoroisopropylidenebisphe
nol)
IT Fluoropolymers, preparation
Fluoropolymers, preparation
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(polyether-, triazine group-contg.; synthesis and characterization of

arom. poly(1,3,5-triazine-ethers) for use in multilayer light emitting devices)

IT Electroluminescent devices
(synthesis and characterization of arom. poly(1,3,5-triazine-ethers) for use in multilayer light emitting devices)

IT 4278-01-7P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(intermediate; in synthesis of difluoro arom. triazine monomers for prepn. of polymers as hole blocking/electron transport layers for use in multilayer light emitting devices)

IT 157141-82-7P 188788-62-7P 188788-67-2P 188788-74-1P 188788-78-5P
RL: PEP (Physical, engineering or chemical process); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); RACT (Reactant or reagent)
(monomer; for prepn. of polymers as hole blocking/electron transport layers for use in multilayer light emitting devices)

IT 62-53-3, Benzenamine, reactions 64-17-5, Ethanol, reactions 66-77-3, 1-Naphthaldehyde 455-19-6, 4-(Trifluoromethyl)benzaldehyde 872-85-5, 4-Pyridinecarboxaldehyde 1194-02-1, 4-Fluorobenzonitrile 4363-93-3, 4-Formylquinoline
RL: RCT (Reactant); RACT (Reactant or reagent)
(reactant; in synthesis of difluoro arom. triazine monomers for prepn. of polymers as hole blocking/electron transport layers for use in multilayer light emitting devices)

IT 456-14-4P, 4-Fluorobenzamidinium hydrochloride 13213-06-4P 27768-46-3P 79128-83-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(reactant; in synthesis of difluoro arom. triazine monomers for prepn. of polymers as hole blocking/electron transport layers for use in multilayer light emitting devices)

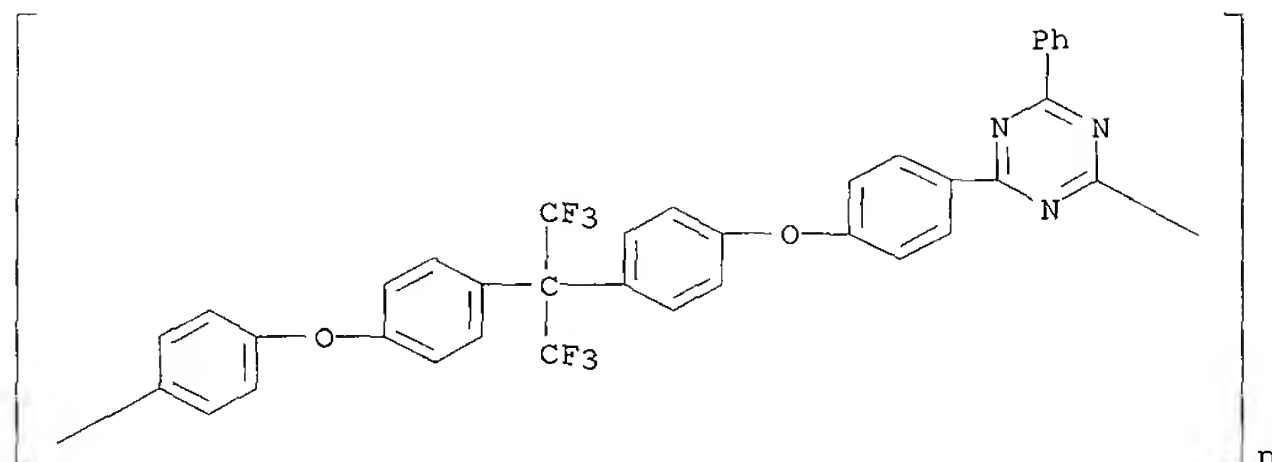
IT 100-52-7, Benzaldehyde, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(reactant; in synthesis of difluoro arom. triazine monomers for synthesis of polymers as hole blocking/electron transport layers for use in multilayer light emitting devices)

IT 188788-56-9P 188788-60-5P 188788-63-8P 188788-65-0P
188788-68-3P 188788-70-7P 188788-75-2P 188788-77-4P
188788-79-6P 188788-80-9P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(synthesis and characterization of arom. poly(1,3,5-triazine-ethers) for use in multilayer light emitting devices)

IT 188788-60-5P 188788-65-0P 188788-70-7P
188788-77-4P 188788-80-9P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(synthesis and characterization of arom. poly(1,3,5-triazine-ethers) for use in multilayer light emitting devices)

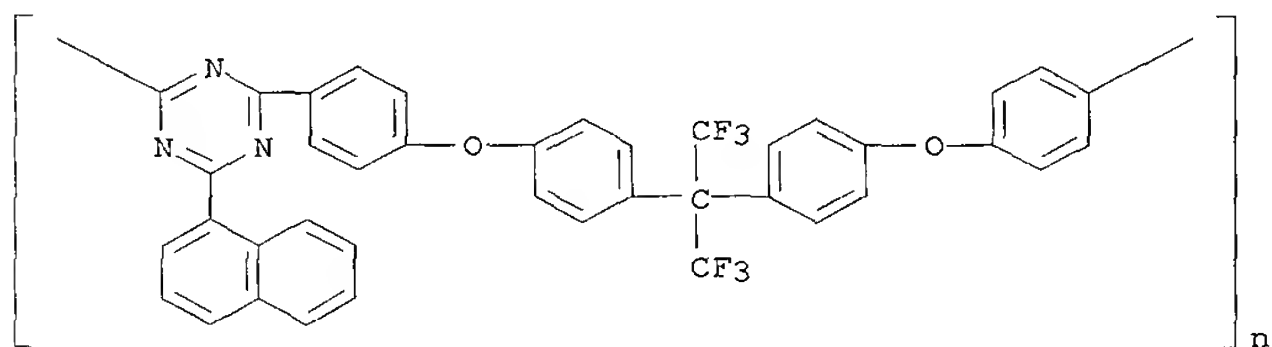
RN 188788-60-5 HCAPLUS

CN Poly[(6-phenyl-1,3,5-triazine-2,4-diyl)-1,4-phenyleneoxy-1,4-phenylene[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]-1,4-phenyleneoxy-1,4-phenylene] (9CI) (CA INDEX NAME)



RN 188788-65-0 HCAPLUS

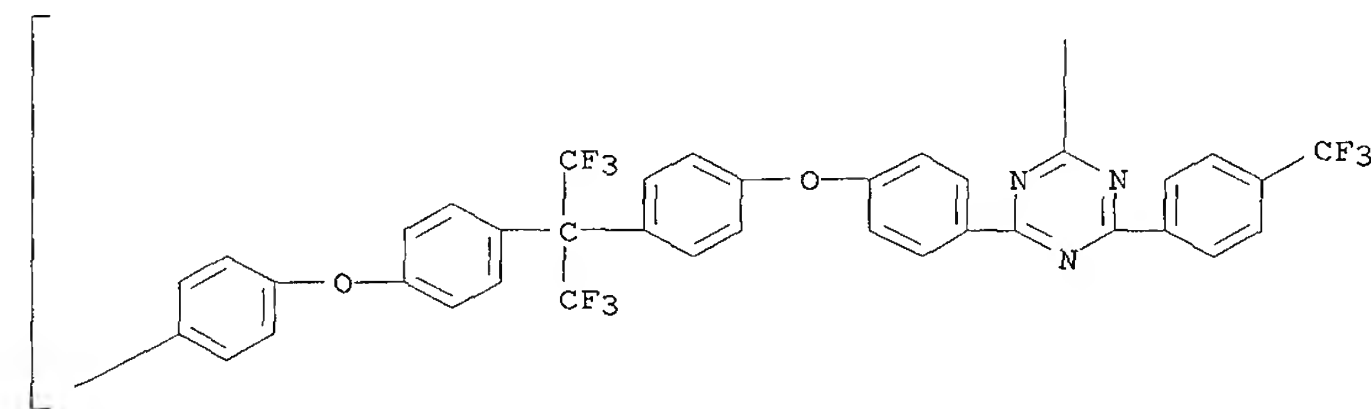
CN Poly[[6-(1-naphthalenyl)-1,3,5-triazine-2,4-diyl]-1,4-phenyleneoxy-1,4-phenylene[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]-1,4-phenyleneoxy-1,4-phenylene] (9CI) (CA INDEX NAME)



RN 188788-70-7 HCAPLUS

CN Poly[[6-[4-(trifluoromethyl)phenyl]-1,3,5-triazine-2,4-diyl]-1,4-phenyleneoxy-1,4-phenylene[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]-1,4-phenyleneoxy-1,4-phenylene] (9CI) (CA INDEX NAME)

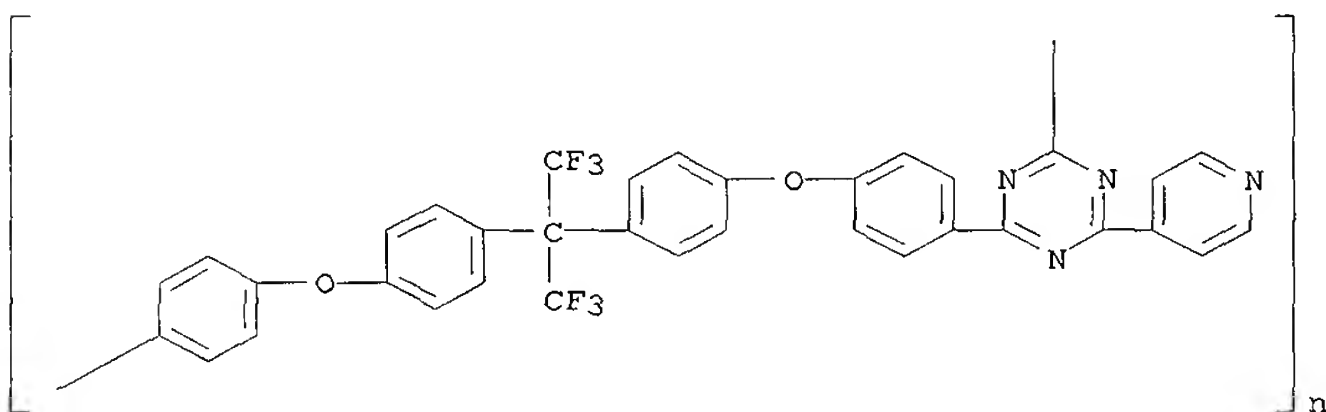
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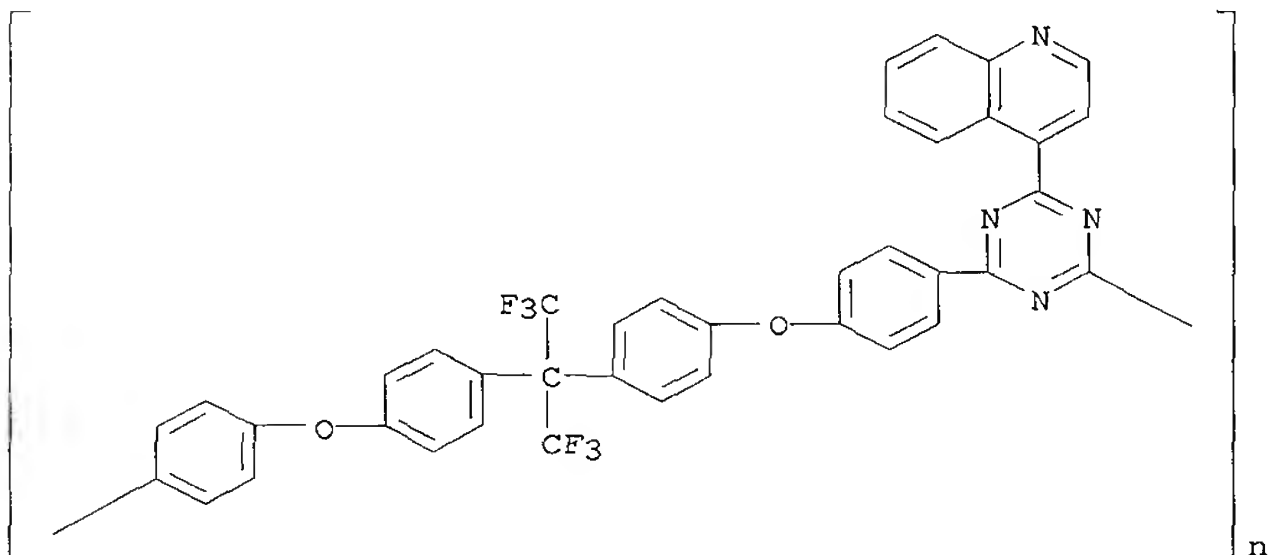
RN 188788-77-4 HCAPLUS

CN Poly[[6-(4-pyridinyl)-1,3,5-triazine-2,4-diyl]-1,4-phenyleneoxy-1,4-phenylene[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]-1,4-phenyleneoxy-1,4-phenylene] (9CI) (CA INDEX NAME)



RN 188788-80-9 HCAPLUS

CN Poly[[6-(4-quinolinyl)-1,3,5-triazine-2,4-diyl]-1,4-phenyleneoxy-1,4-phenylene[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]-1,4-phenyleneoxy-1,4-phenylene] (9CI) (CA INDEX NAME)



L13 ANSWER 11 OF 16 HCAPLUS COPYRIGHT 2003 ACS on STN
AN 1997:760090 HCAPLUS
DN 128:62207
TI Aromatic polyethers with 1,3,5-triazine units as hole blocking/electron transport materials in LEDs
AU Fink, Ralf; Frenz, Carsten; Thelakkat, Mukundan; Schmidt, Hans Werner
CS Bayreuther Inst. Makromolekueelforschung, Univ. Bayreuth, Bayreuth, D-95440, Germany
SO Macromolecular Symposia (1998), 125(Organic Light-Emitting Materials and Devices), 151-155
CODEN: MSYMEC; ISSN: 1022-1360
PB Huethig & Wepf Verlag
DT Journal
LA English
CC 37-5 (Plastics Manufacture and Processing)
Section cross-reference(s): 73
AB Various difluoro-functionalized arom. 1,3,5-triazine monomers were prepd. A series of poly-(1,3,5-triazine-ether)s was synthesized by polycondensation with 4,4'-(hexafluoroisopropylidene)diphenol. The polymers have excellent thermal **stability** and are amorphous with glass transition temps. of 190-250.degree.. In order to examine the potential to apply these polymers in org. electroluminescent devices, the redox properties were studied by cyclic voltammetry. It was found that the monomers have high electron affinity and reach LUMO values in the range of -2.7 to -3.1 eV. This opens the possibility to utilize 1,3,5-triazine-contg. materials as electron injecting/hole blocking layer in LEDs. First LED results are in accordance to these high electron affinities.
ST triazine monomer electron affinity polymer LED; polytriazine polyether electron transport LED
IT Poly(arylenealkenylenes)
RL: DEV (Device component use); USES (Uses)
(LED layer; prepn. and properties of triazine monomers and copolymers usable as electron injection material for LEDs)
IT Polyethers, preparation
Polyethers, preparation
Polyethers, preparation
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(polycyanurate-, fluorine-contg.; prepn. and properties of triazine monomers and copolymers usable as electron injection material for LEDs)
IT Polycyanurates
Polycyanurates
Polycyanurates
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(polyether-, fluorine-contg.; prepn. and properties of triazine monomers and copolymers usable as electron injection material for LEDs)
IT Fluoropolymers, preparation
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(polyether-polycyanurate-; prepn. and properties of triazine monomers and copolymers usable as electron injection material for LEDs)
IT Electroluminescent devices
Electron affinity
HOMO (molecular orbital)
LUMO (molecular orbital)
(prepn. and properties of triazine monomers and copolymers usable as electron injection material for LEDs)

IT Monomers
 RL: PRP (Properties); RCT (Reactant); RACT (Reactant or reagent)
 (prepn. and properties of triazine monomers and copolymers usable as
 electron injection material for LEDs)

IT 26009-24-5, Poly(p-phenylenevinylene)
 RL: DEV (Device component use); USES (Uses)
 (LED layer; prepn. and properties of triazine monomers and copolymers
 usable as electron injection material for LEDs)

IT 50926-11-9, ITO
 RL: DEV (Device component use); USES (Uses)
 (prepn. and properties of triazine monomers and copolymers usable as
 electron injection material for LEDs)

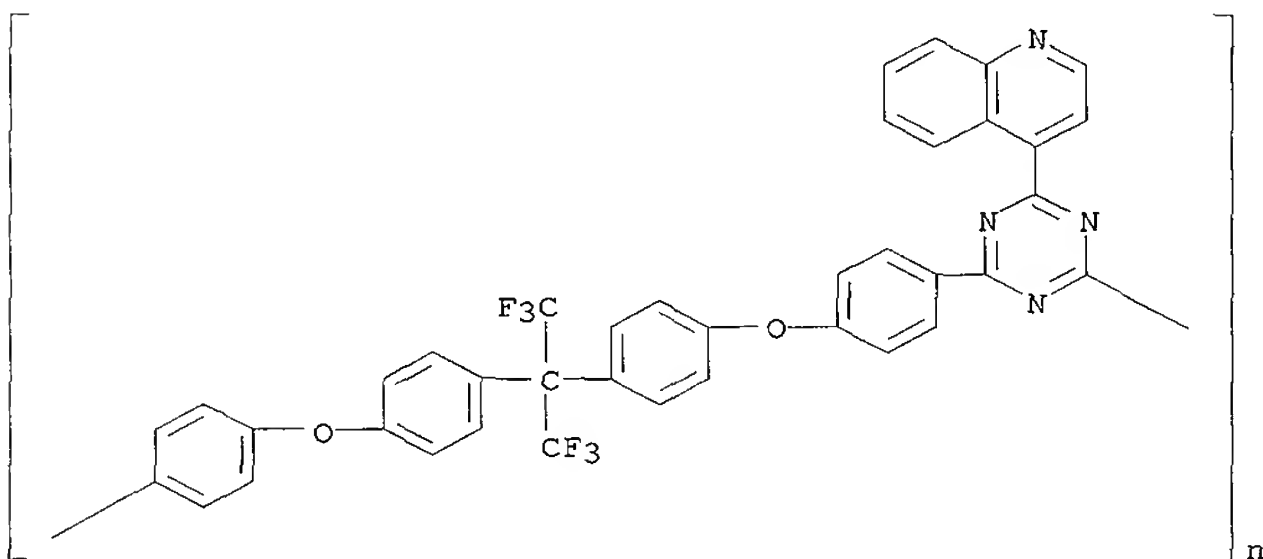
IT 188788-79-6P 188788-80-9P
 RL: DEV (Device component use); PRP (Properties); SPN (Synthetic
 preparation); PREP (Preparation); USES (Uses)
 (prepn. and properties of triazine monomers and copolymers usable as
 electron injection material for LEDs)

IT 157141-82-7 188788-62-7 188788-67-2 188788-74-1 188788-78-5
 RL: PRP (Properties); RCT (Reactant); RACT (Reactant or reagent)
 (prepn. and properties of triazine monomers and copolymers usable as
 electron injection material for LEDs)

IT 188788-56-9P 188788-60-5P 188788-63-8P 188788-65-0P
 188788-68-3P 188788-70-7P 188788-75-2P 188788-77-4P
 RL: PRP (Properties); SPN (Synthetic preparation); PREP
 (Preparation)
 (prepn. and properties of triazine monomers and copolymers usable as
 electron injection material for LEDs)

IT 188788-80-9P
 RL: DEV (Device component use); PRP (Properties); SPN (Synthetic
 preparation); PREP (Preparation); USES (Uses)
 (prepn. and properties of triazine monomers and copolymers usable as
 electron injection material for LEDs)

RN 188788-80-9 HCAPLUS
 CN Poly[[6-(4-quinolinyl)-1,3,5-triazine-2,4-diyl]-1,4-phenyleneoxy-1,4-
 phenylene[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]-1,4-phenyleneoxy-
 1,4-phenylene] (9CI) (CA INDEX NAME)



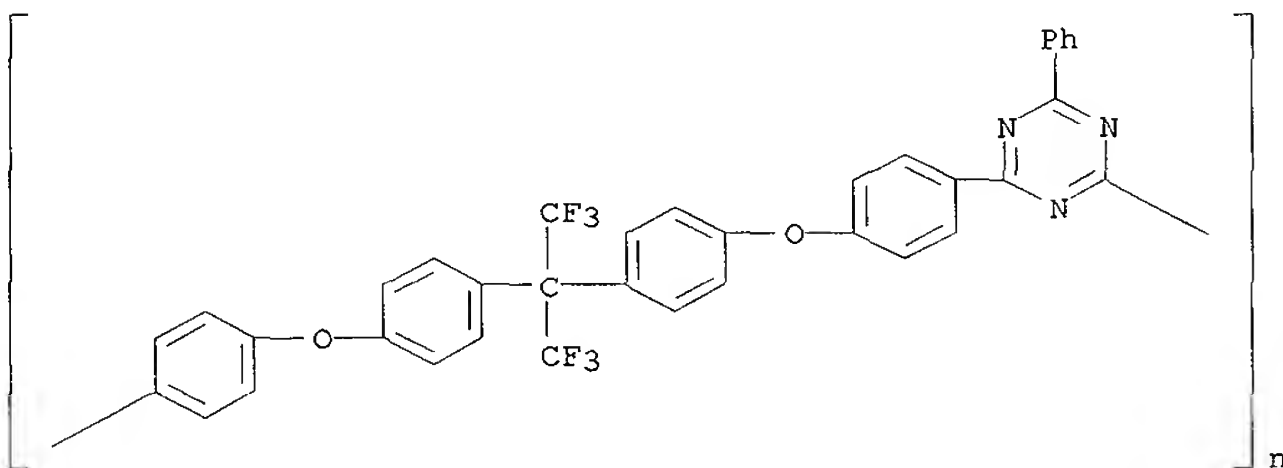
IT 188788-60-5P 188788-65-0P 188788-70-7P
 188788-77-4P

RL: PRP (Properties); SPN (Synthetic preparation); PREP
(Preparation)

(prepn. and properties of triazine monomers and copolymers usable as
electron injection material for LEDs)

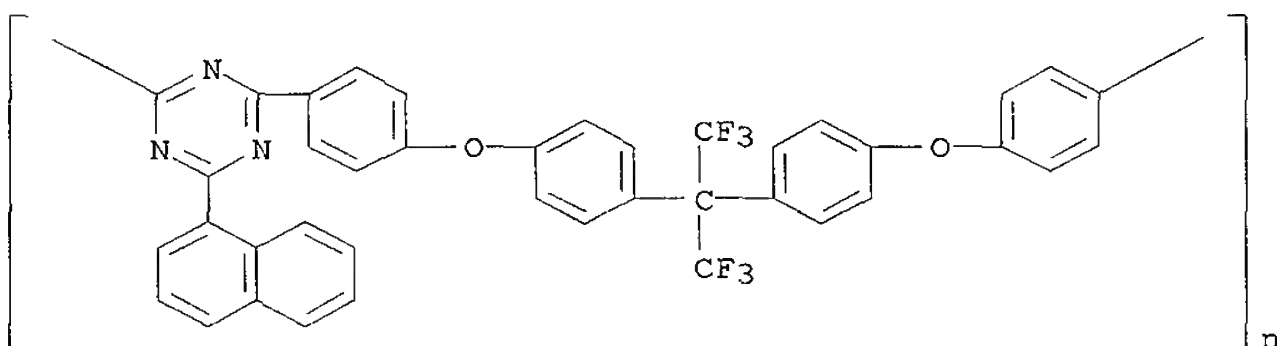
RN 188788-60-5 HCAPLUS

CN Poly[(6-phenyl-1,3,5-triazine-2,4-diyl)-1,4-phenyleneoxy-1,4-phenylene[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]-1,4-phenyleneoxy-1,4-phenylene] (9CI) (CA INDEX NAME)



RN 188788-65-0 HCAPLUS

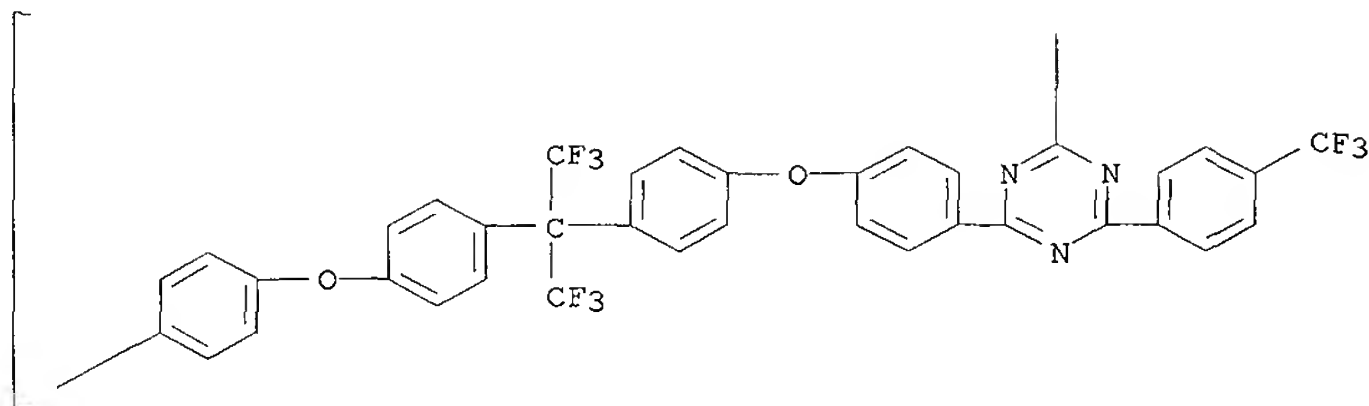
CN Poly[[6-(1-naphthalenyl)-1,3,5-triazine-2,4-diyl]-1,4-phenyleneoxy-1,4-phenylene[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]-1,4-phenyleneoxy-1,4-phenylene] (9CI) (CA INDEX NAME)



RN 188788-70-7 HCAPLUS

CN Poly[[6-[4-(trifluoromethyl)phenyl]-1,3,5-triazine-2,4-diyl]-1,4-phenyleneoxy-1,4-phenylene[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]-1,4-phenyleneoxy-1,4-phenylene] (9CI) (CA INDEX NAME)

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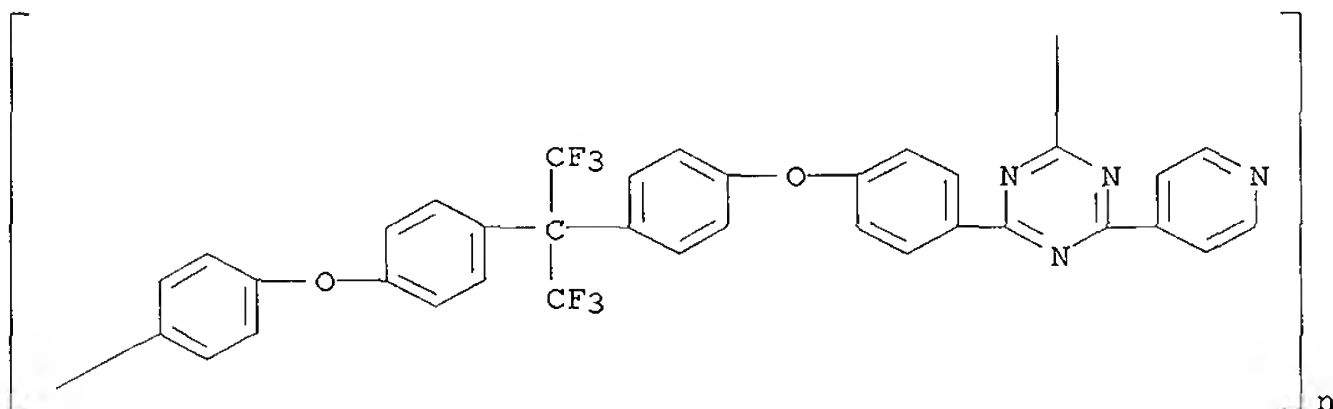


PAGE 1-B



RN 188788-77-4 HCAPLUS

CN Poly[[6-(4-pyridinyl)-1,3,5-triazine-2,4-diyl]-1,4-phenyleneoxy-1,4-phenylene[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]-1,4-phenyleneoxy-1,4-phenylene] (9CI) (CA INDEX NAME)



L13 ANSWER 12 OF 16 HCAPLUS COPYRIGHT 2003 ACS on STN

AN 1997:224262 HCAPLUS

DN 126:264549

KATHLEEN FULLER EIC 1700/PARKER LAW 308-4290

TI Aromatic polyethers with 1,3,5-triazine units as hole blocking/electron transport materials in LEDs

AU Fink, Ralf; Frenz, Carsten; Thelakkat, mMukundan; Schmidt, Hans-Werner

CS Makromolekulare Chemie I, Universitaet Bayreuth, Bayreuth, 95440, Germany

SO Polymer Preprints (American Chemical Society, Division of Polymer Chemistry) (1997), 38(1), 323-324
CODEN: ACPPAY; ISSN: 0032-3934

PB American Chemical Society, Division of Polymer Chemistry

DT Journal

LA English

CC 36-5 (Physical Properties of Synthetic High Polymers)
Section cross-reference(s): 35, 76

AB Asym. substituted bifunctional triazine monomers were prep'd. by reaction of aniline derivs. and 4-fluorobenzamidine. Polyethers contg. the bifunctional triazine units were prep'd. by condensation with hexafluoro-bisphenol-A; the polymers show good thermal **stability** up to 430.degree.. The polymers exhibit low redn. potentials due to high electron affinity, compared to that of other hole blocking/electron transporting materials such as oxadiazoles. The lower redn. potential and the higher oxidn. potential results in a decreased barrier for electron injection and increased barrier for holes. A two-layer LED device fabricated with an s-triazine polyether as electron transport layer and PPV as hole-transport layer and EML, demonstrated the hole blocking/electron injection activity of the s-triazine polyether.

ST polyether triazine electron injection LED; light emitting diode polyether triazine PPV

IT Polyethers, properties
RL: DEV (Device component use); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(arom., fluorine-contg., polytriazine; prepn. and redox potential and LEDs of arom. poly(triazine-ethers) as hole blocking/electron transport layer)

IT Polyethers, properties
RL: DEV (Device component use); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(fluorine-contg., arom., polytriazine; prepn. and redox potential and LEDs of arom. poly(triazine-ethers) as hole blocking/electron transport layer)

IT Fluoropolymers, properties
RL: DEV (Device component use); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(polyether-, arom., polytriazine; prepn. and redox potential and LEDs of arom. poly(triazine-ethers) as hole blocking/electron transport layer)

IT Electroluminescent devices
Electron mobility
Hole mobility
Oxidation potential
Reduction potential
Thermal decomposition enthalpy
(prepn. and redox potential and LEDs of arom. poly(triazine-ethers) as hole blocking/electron transport layer)

IT Poly(arylenealkenylenes)
RL: DEV (Device component use); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(prepn. and redox potential and LEDs of arom. poly(triazine-ethers) as hole blocking/electron transport layer)

IT 50926-11-9P, ITO 96638-49-2P, Poly(phenylene vinylene) 188788-56-9P

188788-60-5P 188788-63-8P 188788-65-0P 188788-68-3P
 188788-70-7P 188788-75-2P 188788-77-4P 188788-79-6P
 188788-80-9P

RL: DEV (Device component use); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)

(prepn. and redox potential and LEDs of arom. poly(triazine-ethers) as hole blocking/electron transport layer)

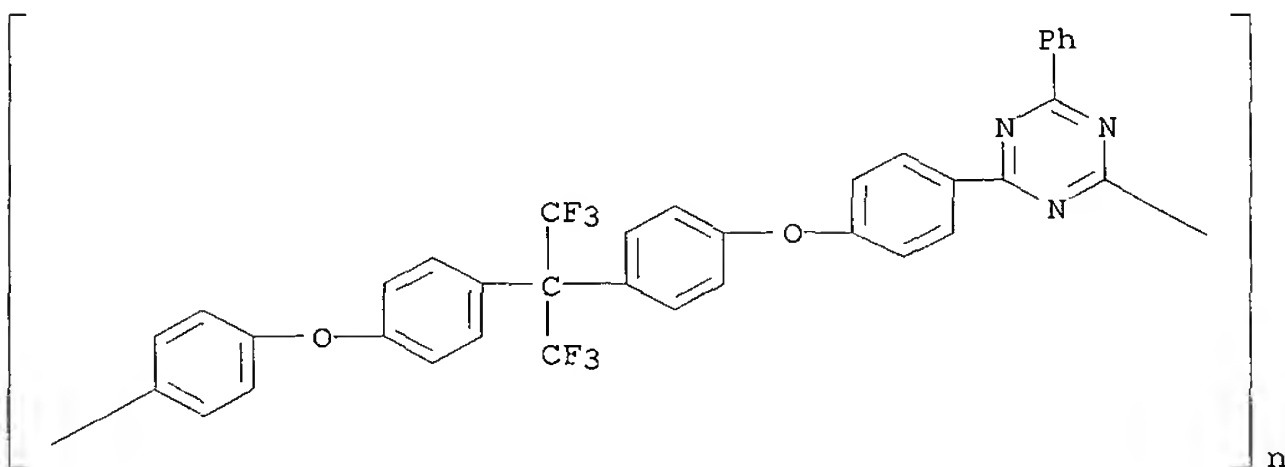
IT 188788-60-5P 188788-65-0P 188788-70-7P
 188788-77-4P 188788-80-9P

RL: DEV (Device component use); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)

(prepn. and redox potential and LEDs of arom. poly(triazine-ethers) as hole blocking/electron transport layer)

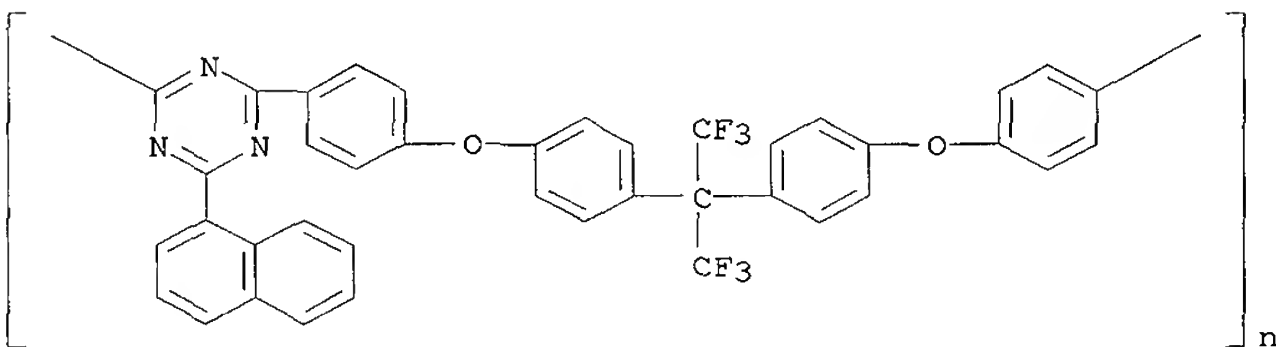
RN 188788-60-5 HCAPLUS

CN Poly[(6-phenyl-1,3,5-triazine-2,4-diyl)-1,4-phenyleneoxy-1,4-phenylene[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]-1,4-phenyleneoxy-1,4-phenylene] (9CI) (CA INDEX NAME)



RN 188788-65-0 HCAPLUS

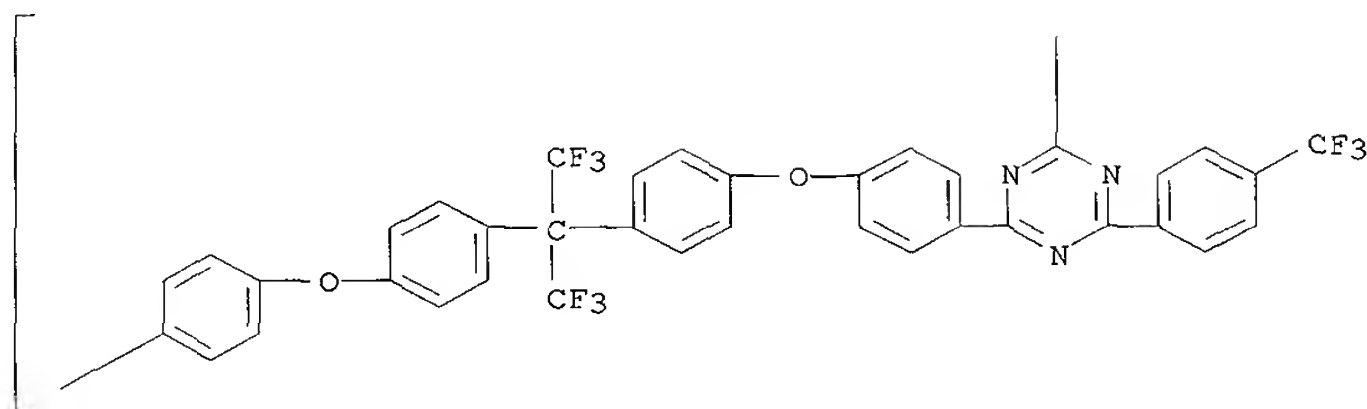
CN Poly[[6-(1-naphthalenyl)-1,3,5-triazine-2,4-diyl]-1,4-phenyleneoxy-1,4-phenylene[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]-1,4-phenyleneoxy-1,4-phenylene] (9CI) (CA INDEX NAME)



RN 188788-70-7 HCAPLUS

CN Poly[[6-[4-(trifluoromethyl)phenyl]-1,3,5-triazine-2,4-diyl]-1,4-phenyleneoxy-1,4-phenylene[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]-1,4-phenyleneoxy-1,4-phenylene] (9CI) (CA INDEX NAME)

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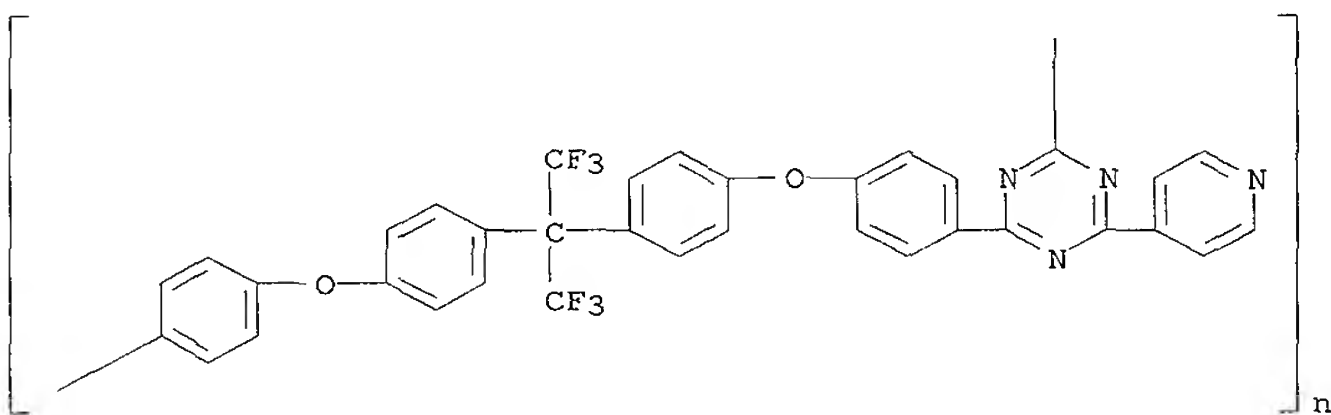


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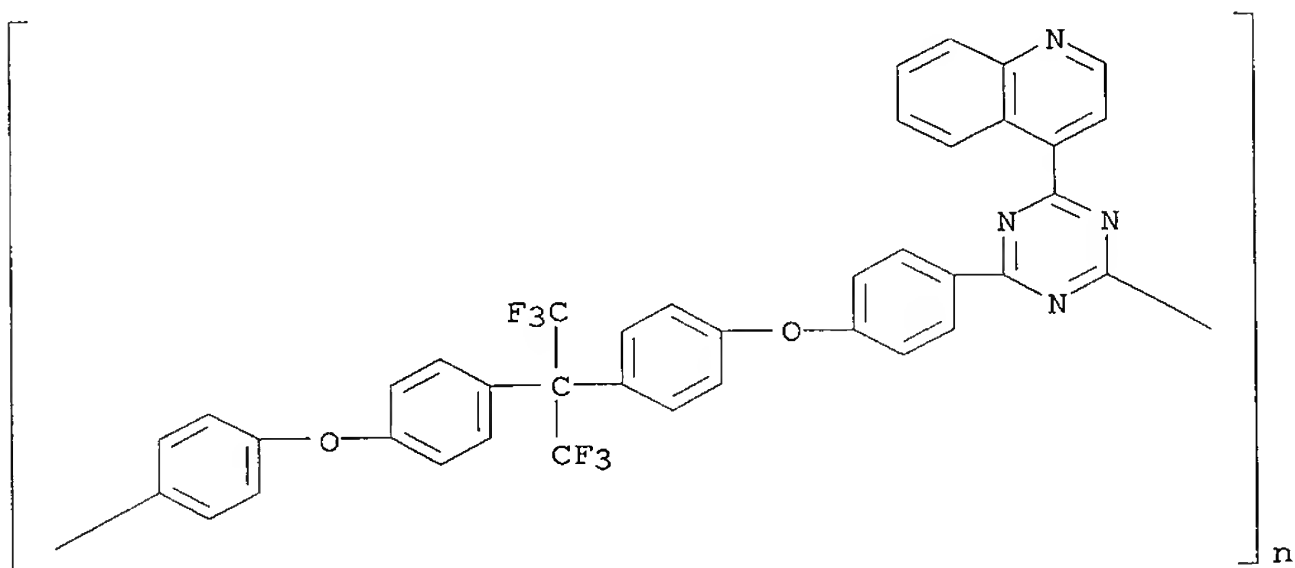
RN 188788-77-4 HCAPLUS

CN Poly[[6-(4-pyridinyl)-1,3,5-triazine-2,4-diyl]-1,4-phenyleneoxy-1,4-phenylene[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]-1,4-phenyleneoxy-1,4-phenylene] (9CI) (CA INDEX NAME)



RN 188788-80-9 HCAPLUS

CN Poly[[6-(4-quinolinyl)-1,3,5-triazine-2,4-diyl]-1,4-phenyleneoxy-1,4-phenylene[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]-1,4-phenyleneoxy-1,4-phenylene] (9CI) (CA INDEX NAME)



L13 ANSWER 13 OF 16 HCAPLUS COPYRIGHT 2003 ACS on STN

AN 1995:476001 HCAPLUS

DN 123:144980

TI Polycarbonates and triazine ring-containing divalent phenols for preparation of polycarbonates

IN Matsuo, Shigeru

PA Idemitsu Kosan Co, Japan

SO Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

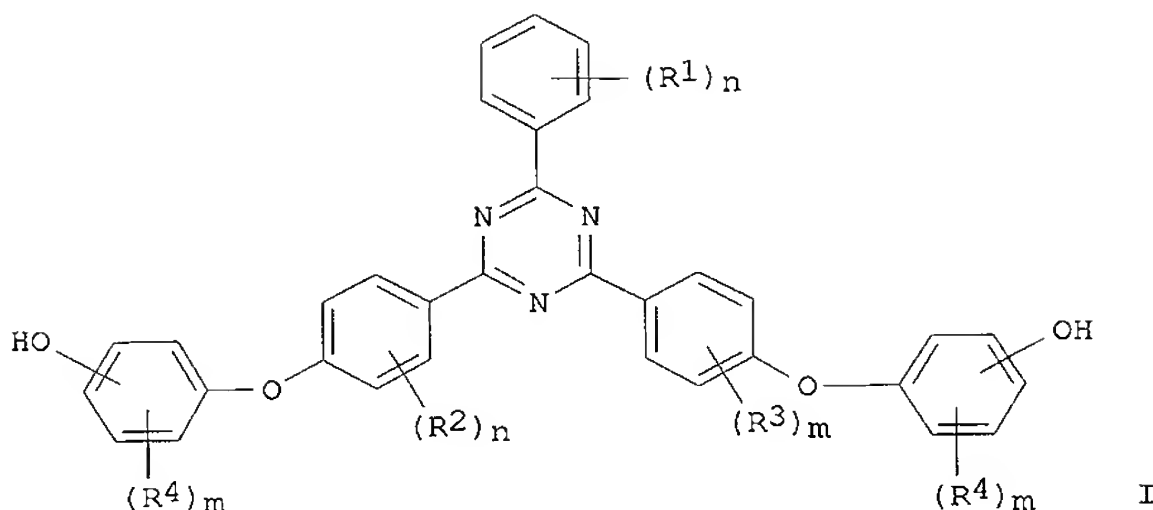
IC ICM C08G064-12

ICS C07D251-34

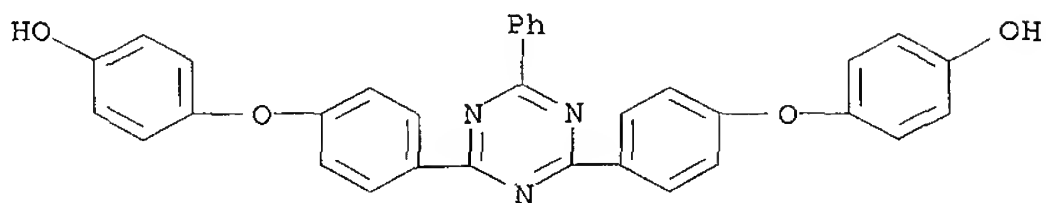
CC 35-5 (Chemistry of Synthetic High Polymers)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	JP 07003000	A2	19950106	JP 1993-169853	19930617
PRAI	JP 1993-169853		19930617		
GI					



- AB The title polymers with reduced viscosity (0.2 g/dL in N-methylpyrrolidone, 30.degree.) 0.1-10.0 dL/g are prepd. by polymn. of I (R1 = C1-13 alkyl, C6-13 aryl, C1-9 alkoxy, PhO, OH; R2-R4 = halo, C1-13 alkyl, C6-13 aryl, C1-9 alkoxy, phenoxy; m = 0-4; n = 0-5) with carbonate-forming compds. and other dihydric phenols. Thus, polymn. of I (m, n = 0, OH at 4-position) with phosgene in pyridine at room temp. gave a polymer with reduced viscosity 0.39 dL/g, Tg 168.degree., and decompn. temp. 429.degree..
- ST triazine ring divalent phenol polycarbonate; heat resistance triazine polycarbonate
- IT Polycarbonates, preparation
 RL: IMF (Industrial manufacture); PREP (Preparation)
 (arom., prepn. of heat-resistant triazine ring-contg. polycarbonates)
- IT **166656-91-3P**
 RL: RCT (Reactant); **SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)**
 (prepn. of heat-resistant triazine ring-contg. polycarbonates)
- IT **166656-92-4P 166656-93-5P 166656-94-6P**
 RL: **SPN (Synthetic preparation); PREP (Preparation)**
 (prepn. of heat-resistant triazine ring-contg. polycarbonates)
- IT 123-31-9, 1,4-Benzenediol, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction with bis(fluorophenyl)phenyltriazine)
- IT 157141-82-7, 2,4-Bis(4-fluorophenyl)-6-phenyltriazine
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction with hydroquinone)
- IT **166656-91-3P**
 RL: RCT (Reactant); **SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)**
 (prepn. of heat-resistant triazine ring-contg. polycarbonates)
- RN 166656-91-3 HCAPLUS
- CN Phenol, 4,4'-[(6-phenyl-1,3,5-triazine-2,4-diyl)bis(4,1-phenyleneoxy)]bis-(9CI) (CA INDEX NAME)



IT 166656-92-4P 166656-93-5P 166656-94-6P

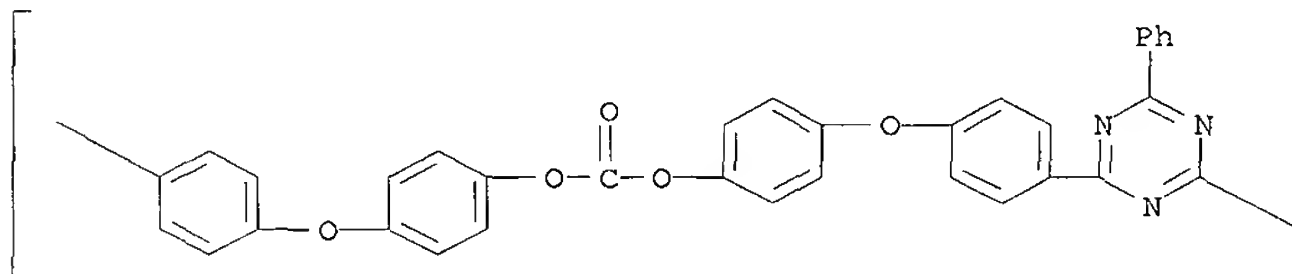
RL: SPN (Synthetic preparation); PREP (Preparation)

(prepn. of heat-resistant triazine ring-contg. polycarbonates)

RN 166656-92-4 HCAPLUS

CN Poly[(6-phenyl-1,3,5-triazine-2,4-diyl)-1,4-phenyleneoxy-1,4-phenyleneoxycarbonyloxy-1,4-phenyleneoxy-1,4-phenylene] (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



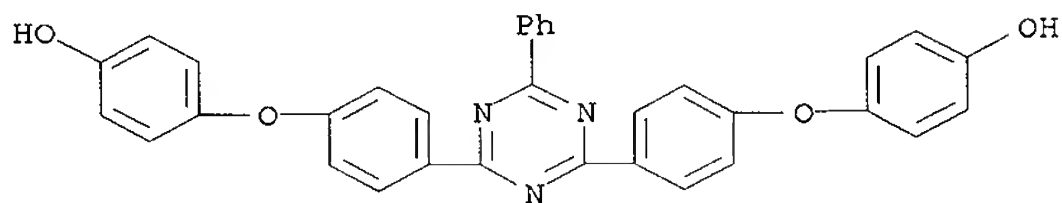
RN 166656-93-5 HCAPLUS

CN Carbonic dichloride, polymer with 4,4'-[(6-phenyl-1,3,5-triazine-2,4-diyl)bis(4,1-phenyleneoxy)]bis[phenol] (9CI) (CA INDEX NAME)

CM 1

CRN 166656-91-3

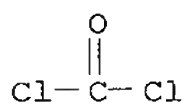
CMF C33 H23 N3 O4



CM 2

CRN 75-44-5

CMF C Cl2 O



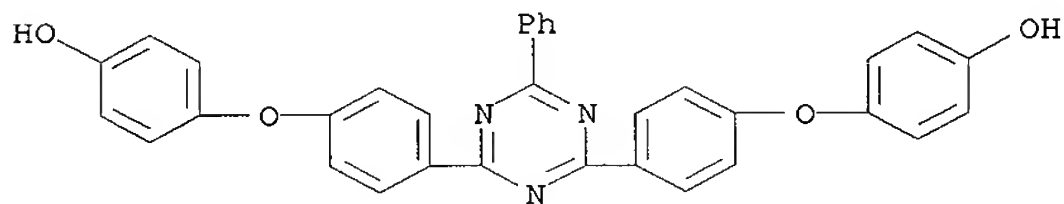
RN 166656-94-6 HCAPLUS

CN Carbonic dichloride, polymer with 4,4'-(1-methylethylidene)bis[phenol] and 4,4'-[(6-phenyl-1,3,5-triazine-2,4-diyl)bis(4,1-phenyleneoxy)]bis[phenol] (9CI) (CA INDEX NAME)

CM 1

CRN 166656-91-3

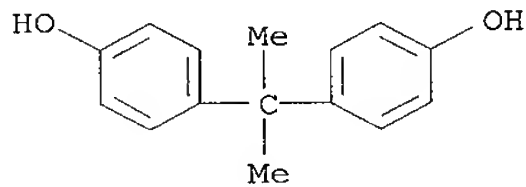
CMF C33 H23 N3 O4



CM 2

CRN 80-05-7

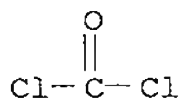
CMF C15 H16 O2



CM 3

CRN 75-44-5

CMF C Cl2 O



L13 ANSWER 14 OF 16 HCAPLUS COPYRIGHT 2003 ACS on STN

AN 1995:103482 HCAPLUS

DN 122:56873

TI Aromatic polyethers prepared from bis(fluorophenyl)phenyltriazine and aromatic diols

IN Matsuo, Shigeru

PA Idemitsu Kosan Co, Japan

SO Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C08G065-40

CC 35-5 (Chemistry of Synthetic High Polymers)

Section cross-reference(s): 37

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 06184300	A2	19940705	JP 1992-354736	19921217
PRAI	JP 1992-354736		19921217		
AB	The title polyethers with reduced viscosity [30.degree.; 0.5 g/dL; N-methylpyrrolidone (I)] 0.1-10 are prepd. in a neutral polar solvent in the presence of an alkali metal compd. Reacting 13.95 g 2,4-bis(4-fluorophenyl)-6-phenyl-1,3,5-triazine with 7.45 g 4,4'-biphenol in I at 200.degree. in the presence of K2CO3 gave a 96% yield of a polyether with glass temp. 241.degree. and 1% wt. loss temp. 513.degree..				
ST	polyether bisfluorophenyltriazine arom diol; triazine bisfluorophenyl arom diol polyether; fluorophenyltriazine bis arom diol polyether; heat resistance polyether bisfluorophenyltriazine diol; biphenol bisfluorophenyltriazine polyether				
IT	Polymerization (of bis(fluorophenyl)phenyltriazine with arom. diols)				
IT	Heat-resistant materials (polyethers from bis(fluorophenyl)phenyltriazine and arom. diols)				
IT	Polyethers, preparation RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (arom., bis(fluorophenyl)phenyltriazine-based; prepn. of heat-resistant)				
IT	15295-13-3P RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent) (prepn. from fluorobenzonitrile and sulfur trioxide and reaction with phenyldiazine)				
IT	157141-82-7P RL: IMF (Industrial manufacture); PREP (Preparation) (prepn. from oxathiadiazine dioxide and phenyldiazine)				
IT	157141-83-8P 157141-94-1P RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation) (prepn. of heat-resistant)				

IT 157141-85-0P 157141-87-2P 157141-95-2P 157141-96-3P
 RL: PRP (Properties); SPN (Synthetic preparation); PREP
 (Preparation)
 (prepn. of heat-resistant)

IT 7446-11-9, Sulfur trioxide, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction with fluorobenzonitrile in prepn. of oxathiadiazine dioxide)

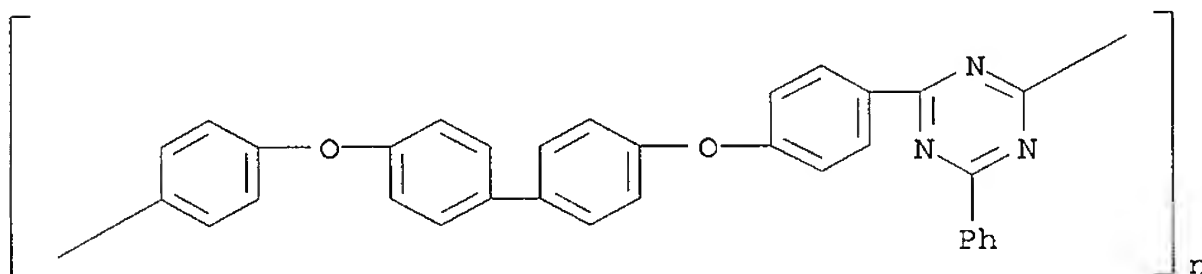
IT 1670-14-0
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction with oxathiadiazine dioxide in prepn. of
 bis(fluorophenyl)phenyltriazine)

IT 1194-02-1, p-Fluorobenzonitrile
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction with sulfur trioxide in prepn. of oxathiadiazine dioxide)

IT 157141-94-1P
 RL: IMF (Industrial manufacture); PRP (Properties); PREP
 (Preparation)
 (prepn. of heat-resistant)

RN 157141-94-1 HCAPLUS

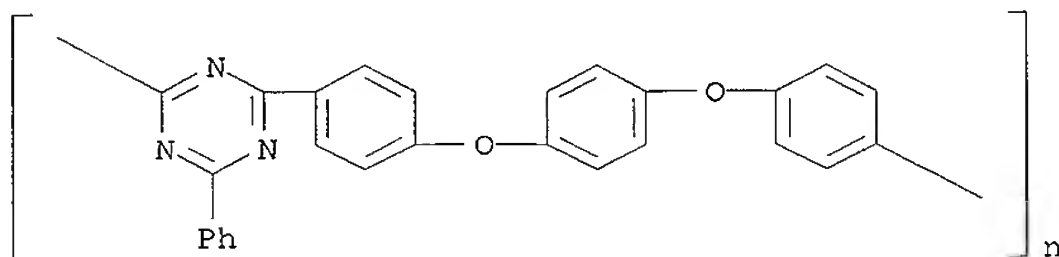
CN Poly[(6-phenyl-1,3,5-triazine-2,4-diyl)-1,4-phenyleneoxy[1,1'-biphenyl]-
 4,4'-diyloxy-1,4-phenylene] (9CI) (CA INDEX NAME)



IT 157141-95-2P 157141-96-3P
 RL: PRP (Properties); SPN (Synthetic preparation); PREP
 (Preparation)
 (prepn. of heat-resistant)

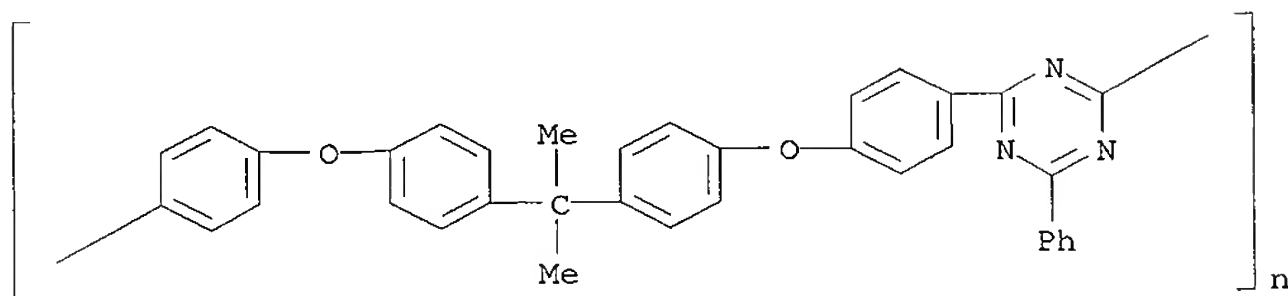
RN 157141-95-2 HCAPLUS

CN Poly[(6-phenyl-1,3,5-triazine-2,4-diyl)-1,4-phenyleneoxy-1,4-phenyleneoxy-
 1,4-phenylene] (9CI) (CA INDEX NAME)



RN 157141-96-3 HCAPLUS

CN Poly[(6-phenyl-1,3,5-triazine-2,4-diyl)-1,4-phenyleneoxy-1,4-phenylene(1-
 methylethylidene)-1,4-phenyleneoxy-1,4-phenylene] (9CI) (CA INDEX NAME)



L13 ANSWER 15 OF 16 HCAPLUS COPYRIGHT 2003 ACS on STN

AN 1994:509825 HCAPLUS

DN 121:109825

TI Synthesis and properties of poly(arylene ether phenyl-s-triazine)s

AU Matsuo, Shigeru

CS Central Research Laboratories, Idemitsu Kosan, Chiba, 299-02, Japan

SO Journal of Polymer Science, Part A: Polymer Chemistry (1994), 32(11), 2093-8

CODEN: JPACEC; ISSN: 0887-624X

DT Journal

LA English

CC 35-7 (Chemistry of Synthetic High Polymers)

Section cross-reference(s): 36

AB A series of new poly(arylene ether phenyl-s-triazine)s was prepd. by the nucleophilic arom. substitution polymn. of the potassium salt of bisphenols with 2,4-bis(halophenyl)-6-phenyl-s-triazine in N-methyl-2-pyrrolidone at elevated temp. The polymers with inherent viscosities exceeding 0.5 were obtained after polymn. for 1 h using 2,4-bis(fluorophenyl)-6-phenyl-s-triazine as a monomer. The glass transition temps. of the resulting polymers ranged from 200 to 260.degree.C depending on the bisphenol used in the polymer synthesis. The poly(arylene ether phenyl-s-triazine)s demonstrated excellent thermal **stabilities** in excess of 490.degree.C (5% wt. loss in air). The isothermal TGA measurements (400.degree.C under air or nitrogen atm.) revealed that the 4,4'-bisphenol- and hydroquinone-based poly(arylene ether phenyl-s-triazine)s belong to the most superior class of heat-resistant polymers, such as polyimide Kapton. The mech. properties of these polymers are also described.

ST polyether triazine prepn thermal mech property;
bishalophenylphenyltriazine bisphenol copolymer heat resistant; glass temp
bishalophenylphenyltriazine bisphenol copolymer; arom polyether triazine
prepn property

IT Heat-resistant materials
(bis(halophenyl)phenyltriazine-bisphenol copolymers, prepn. and thermal
and mech. properties of)

IT Elasticity
Expansion, Dilation, and Elongation
Glass temperature and transition
Tensile strength
(of bis(halophenyl)phenyltriazine-bisphenol copolymers)

IT Solubility
(of bis(halophenyl)phenyltriazine-bisphenol copolymers in org.
solvents)

IT Polyethers, preparation
RL: SPN (Synthetic preparation); PREP (Preparation)
(arom., triazine group-contg., bis(halophenyl)phenyltriazine-bisphenol

copolymers, prepn. and thermal and mech. properties of)

IT Polymerization
(nucleophilic, bis(halophenyl)phenyltriazine with bisphenols)

IT 3114-53-2P, 2,4-Bis(chlorophenyl)-6-phenyl-s-triazine 157141-82-7P,
2,4-Bis(fluorophenyl)-6-phenyl-s-triazine
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(prepn. and polymn. of, with bisphenols)

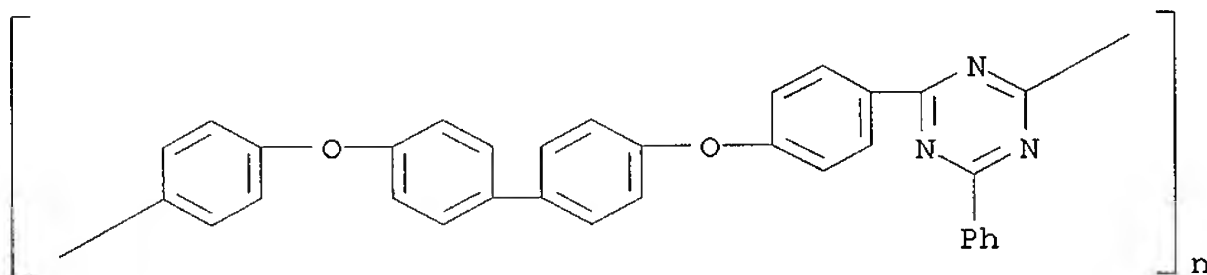
IT 157141-83-8P 157141-84-9P 157141-85-0P 157141-86-1P 157141-87-2P
157141-88-3P 157141-89-4P 157141-90-7P 157141-91-8P 157141-92-9P
157141-94-1P 157141-95-2P 157141-96-3P
157141-97-4P 157141-98-5P 157141-99-6P
157142-00-2P
RL: PRP (Properties); SPN (Synthetic preparation); PREP
(Preparation)
(prepn. and thermal and mech. properties of)

IT 63114-63-6 157141-93-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with benzamidine)

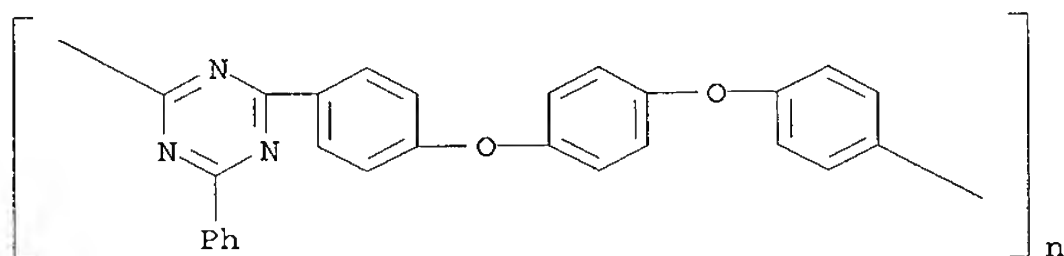
IT 618-39-3, Benzamidine
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with bis(halophenyl)oxathiadiazine dioxide)

IT 157141-94-1P 157141-95-2P 157141-96-3P
157141-97-4P 157141-98-5P 157141-99-6P
157142-00-2P
RL: PRP (Properties); SPN (Synthetic preparation); PREP
(Preparation)
(prepn. and thermal and mech. properties of)

RN 157141-94-1 HCAPLUS
CN Poly[(6-phenyl-1,3,5-triazine-2,4-diyl)-1,4-phenyleneoxy[1,1'-biphenyl]-
4,4'-diyloxy-1,4-phenylene] (9CI) (CA INDEX NAME)

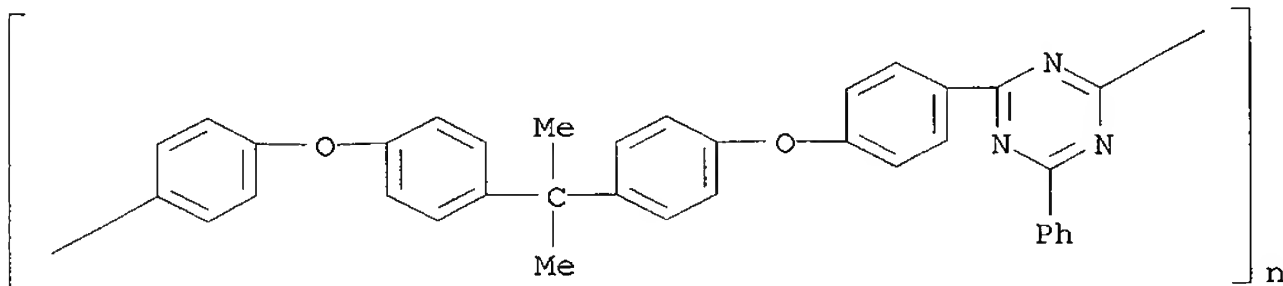


RN 157141-95-2 HCAPLUS
CN Poly[(6-phenyl-1,3,5-triazine-2,4-diyl)-1,4-phenyleneoxy-1,4-phenyleneoxy-
1,4-phenylene] (9CI) (CA INDEX NAME)



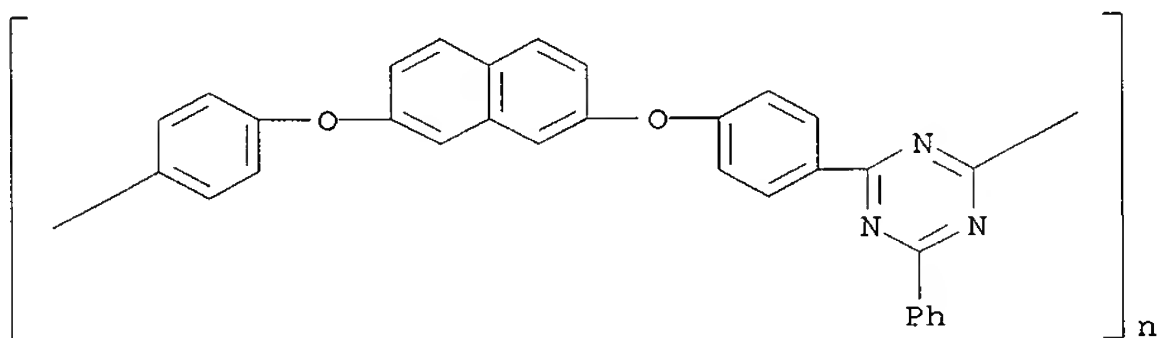
RN 157141-96-3 HCAPLUS

CN Poly[(6-phenyl-1,3,5-triazine-2,4-diyl)-1,4-phenyleneoxy-1,4-phenylene(1-methylethylidene)-1,4-phenyleneoxy-1,4-phenylene] (9CI) (CA INDEX NAME)



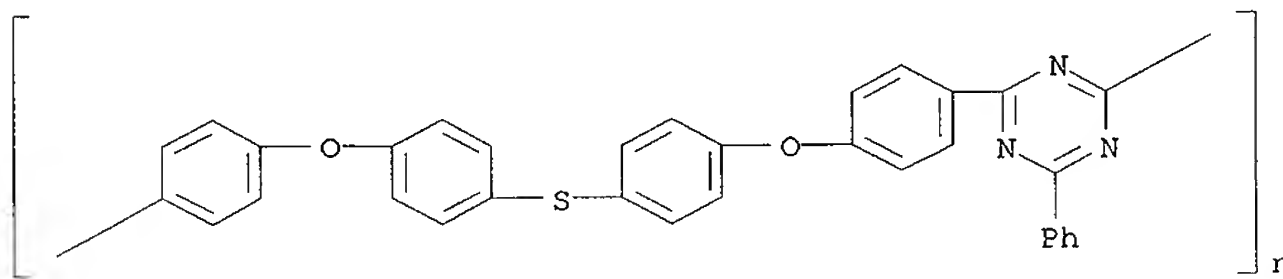
RN 157141-97-4 HCAPLUS

CN Poly[(6-phenyl-1,3,5-triazine-2,4-diyl)-1,4-phenyleneoxy-2,7-naphthalenediyl-1,4-phenylene] (9CI) (CA INDEX NAME)



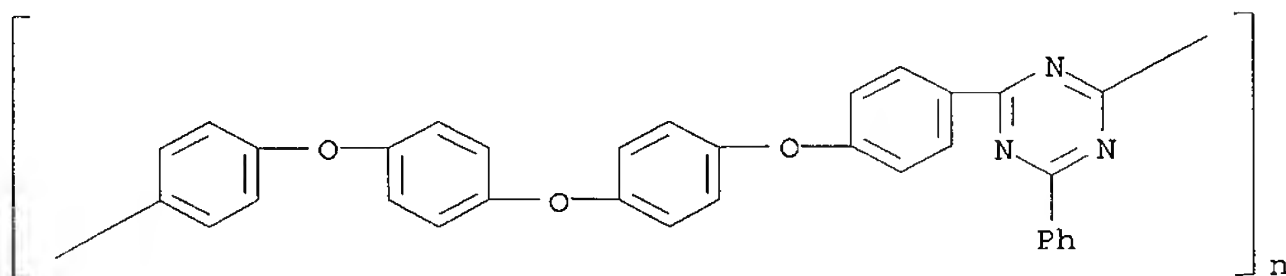
RN 157141-98-5 HCAPLUS

CN Poly[(6-phenyl-1,3,5-triazine-2,4-diyl)-1,4-phenyleneoxy-1,4-phenyleneoxy-1,4-phenylene] (9CI) (CA INDEX NAME)



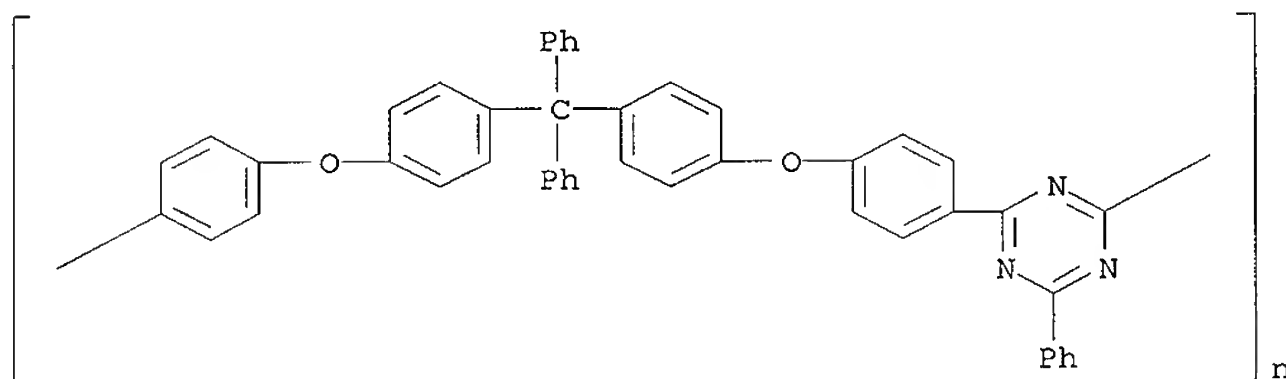
RN 157141-99-6 HCAPLUS

CN Poly[(6-phenyl-1,3,5-triazine-2,4-diyl)-1,4-phenyleneoxy-1,4-phenyleneoxy-1,4-phenyleneoxy-1,4-phenylene] (9CI) (CA INDEX NAME)



RN 157142-00-2 HCAPLUS

CN Poly[(6-phenyl-1,3,5-triazine-2,4-diyl)-1,4-phenyleneoxy-1,4-phenylene(diphenylmethylene)-1,4-phenyleneoxy-1,4-phenylene] (9CI) (CA INDEX NAME)



L13 ANSWER 16 OF 16 HCAPLUS COPYRIGHT 2003 ACS on STN

AN 1984:473188 HCAPLUS

DN 101:73188

TI Syntheses and characterization of heteroatom-bridged metal-free phthalocyanine network polymers and model compounds

AU Snow, Arthur W.; Griffith, James R.; Marullo, N. P.

CS Nav. Res. Lab., Washington, DC, 20375, USA

SO Macromolecules (1984), 17(8), 1614-24

CODEN: MAMOBX; ISSN: 0024-9297

DT Journal

LA English

CC 35-7 (Chemistry of Synthetic High Polymers)

Section cross-reference(s): 76

AB Procedures for the prepn. of metal-free phthalocyanine network polymers from O-, S-, and Se-bridged bis(phthalonitrile) monomers were investigated based on phthalocyanine model compds. derived from phenoxy-, (phenylthio)-, and (phenylseleno)phthalonitrile compds. The O- and S-substituted phthalonitrile compds. were converted in high yield to the corresponding metal-free phthalocyanine compds. by reaction with tetrahydropyridine, hydroquinone, or 4,4'-biphenol. With an optimum quantity of coreactant, the phthalocyanine yield ranged from near-quant. to 65% to no conversion for the resp. O, S, and Se phthalonitriles. A side reaction to a triazine structure was also investigated. The model phthalocyanine compds. were characterized by IR, electronic, ¹H NMR, and X-ray diffraction spectroscopies and TGA, from which an anal. of the corresponding phthalocyanine network polymers was made. Spectroscopic anal. and H₂SO₄ insoly. indicated a significantly higher phthalocyanine

content in the O-bridged network polymer. Both phthalocyanine model compds. and network polymers had very high elec. resistivities, and the polymers were not dopable with iodine.

ST phthalocyanine polymer; oxyphthalonitrile polymer; thiophthalonitrile polymer; selenophthalonitrile polymer

IT Polymerization
(of heteroatom bridged phthalonitrile compds., to phthalocyanine ring-contg. polymers)

IT Polymer degradation
(thermal, of metal-free phthalocyanine polymers)

IT 91-15-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(oligomerization of, to tris(cyanophenyl)triazine)

IT 91191-63-8P 91191-64-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(phthalocyanine ring-contg., prepn. and thermal properties of)

IT 91191-59-2P 91191-60-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and polymn. of)

IT 38791-62-7P 77474-63-6P 91191-58-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and tetramerization of, to phthalocyanine derivs.)

IT 6876-33-1P 23277-29-4P 77474-60-3P 77474-61-4P 77474-65-8P
77492-98-9P 91191-61-6P 91191-62-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, as model for phthalocyanine polymers)

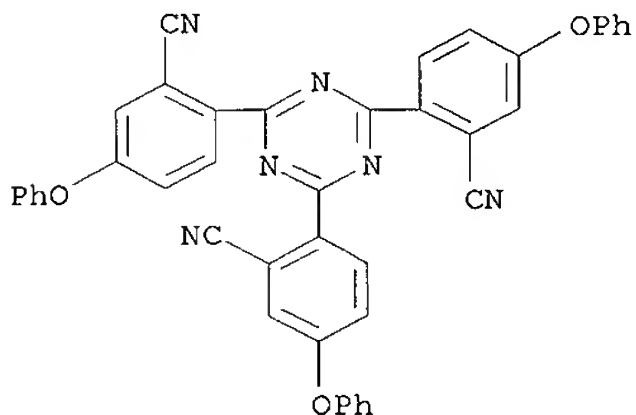
IT 108-95-2, reactions 108-98-5, reactions 645-96-5 1313-82-2, reactions 1313-85-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with nitrophthalonitrile)

IT 31643-49-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with phenol analogs)

IT 91191-61-6P 91191-62-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, as model for phthalocyanine polymers)

RN 91191-61-6 HCAPLUS

CN Benzonitrile, 2,2',2''-(1,3,5-triazine-2,4,6-triyl)tris[5-phenoxy- (9CI)
(CA INDEX NAME)



RN 91191-62-7 HCAPLUS

CN Benzonitrile, 2,2',2''-(1,3,5-triazine-2,4,6-triyl)tris[4-phenoxy- (9CI)
(CA INDEX NAME)

